Océ User Manual

Océ Arizona 550 GT

User Manual, Version 1.1 Revision A

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Contents

Chapter 1
Introduction **7**
Preface 8
Product Compliance 11

Chapter 2
Product Overview **15**
Printer Specifications 16

Chapter 3
Safety Information **19**
Safety Guidelines for Ink Materials 20
UV Curing System Safety 24
Interlock Safety System 26
Océ Arizona 550 GT Safety Labels 28
Safety Awareness 32
Roll Media Safety Awareness 41

Chapter 4
How to Navigate the User Interface **43**
Operator Interface Hardware 44
Printer Interface Software 50
Print Job Control Module 52
Counters Module 61
Settings Module 62
Tools and Utilities Module 67
Installation and Upgrade Module 71

Chapter 5
How to Operate Your Arizona Printer **73**
Training Requirements 74
How to Power the Printer On and Off 75
How to Install the Onyx Printer Driver 80
How to Manage Print Jobs 83
Daily Start-up and Shut-down 83
How to Set Up a Print Job 84
How to Manage the Media Vacuum 88
The Media Vacuum System 88
How to Create Custom Vacuum Zones 91
How to Manage Media 97
How to Handle Media 97

Underlay Board to Reduce Artifacts....101

Chapter 6
How to Operate the Océ Arizona 550 XT....103
Océ Arizona 550 XT Specifications and Features....104
How to Use the Océ Arizona 550 XT Vacuum System....107
How to Print With Dual Origins....111

Chapter 7
How to Operate the Roll Media Option....113
Roll Media Option Hardware....114
Roll Media Theory of Operations....117
Roll Media Option Specifications....120
Foot Pedal Switch Functions....122
Roll Media Manager....123
How to Load Media....125
How to Unload and Cut Media....133
How to Set Up a Roll Media Job in ProductionHouse....135
How to Print on Roll Media 137
How to Determine Media Advance Correction....141
How to Use Media Edge Protectors....144

Chapter 8
How to Use the Static Suppression Upgrade Kit....147
Reduce Static with a Static Suppression Kit 148

Chapter 9
How to Work With White Ink....151
Operator Guidelines for White Ink....152
White Ink Workflow Overview....153
How to Configure ProductionHouse for White Ink....156
QuickStart....158
How to Prepare White Ink Print Jobs....160
How to Create a White Flood Fill Layer....160
How to Create Spot Data with the Spot Layer Tool....162
How to Create White Spot Data in Photoshop....166
How to Create White Spot Data in Illustrator....171
How to Print With White Ink....183
How to Use Media Models....183
How to Create a Media for White Ink Print Jobs....192
How to Create and Use Quick Sets....205

Chapter 10
Ink System Management....209
Arizona Printer Inks....210
How to Change Ink Bags....214

Chapter 11
Error Handling and Troubleshooting....221
Troubleshooting Overview....222
How To Improve Quality When Banding Occurs....224

Chapter 12
Printer Maintenance....225
Maintenance Guidelines....226
Maintenance Procedures....228
Clean Carriage Underside....228
Printhead Maintenance....231
Swab Printheads....239
How to Clean the UV Lamp Filter....243
How to Remove Ink....245
Empty the Ink Waste Tray....247
Fill the Coolant Reservoir 249
Replace the Spit Catcher Foam Pad....252
Clean Gantry Rails....254
How to Change Ink Filters....256
How to Change a UV Lamp Bulb....261
How to Maintain White Ink....267
Roll Media Option Maintenance....269
RMO Maintenance Guidelines....269
How to Clean the Rubber Capstan....270

Appendix A
Application Information....275
Application Resources on the Web Site....276

Chapter 1
Introduction

Preface

Introduction

This manual provides the operator with information about the Océ Arizona 550 GT and Océ Arizona 550 XT UV flatbed inkjet printers. The manual orients you to the many features and procedures that allow you to print professional quality images on various media with this printer. This version of the user manual provides support for printer software Revision 1.1 or greater.

Multi-Language Support

The printer user interface software supports multiple languages. To select your preferred language and other setup information, refer to the Settings Module in Chapter 4.

This manual is also available in other languages. Printers are shipped with a printed copy of the US English version. You can download a PDF file of the manual in all of the languages that we support from the Customer Support web site: www.dgs.oce.com/

Supported languages:

- English
- Dutch
- German
- French
- Spanish
- Italian
- Japanese

Océ DGS on the Internet

For further information and support for your printer or for information on other Océ Display Graphics Systems products, please visit our web site: www.dgs.oce.com
To provide feedback and report errors in this document, send email to: DGSTechnical.Writer@oce.com

Safety Information

This manual has three sections that contain details on safety when handling ink and using the printer. Also, where applicable, cautions and warnings are used throughout this manual to draw your attention to safety precautions.

- "Safety Guidelines for Ink Materials" offers advice in the proper handling of UV inks;
- "Interlock Safety System" explains the safety features built into the printer that prevent or minimize access to Mechanical, Electrical, Thermal and UV hazards; and
- "UV Curing System Safety" presents warning about the dangers of exposure to UV light.

Customer Service

If your printer malfunctions and you are unable to resolve the problem, field service technicians can be dispatched to your site to conduct repairs. Service visits are paid for by the customer, either under a maintenance agreement, by purchase order or prepayment. Time and material rates are charged for any service not covered under a maintenance agreement. Before calling to report a problem, gather as much information about the problem as possible and have it ready to provide to your customer care center. The more information you can provide initially, the more quickly the problem can be corrected.

Statement of Foreseen Use

The Océ Arizona flatbed inkjet printers are intended for use in a commercial printshop environment. Factory-authorized training is made available for operators at the time of installation. The printers use piezo printing technology and UV-curable inks to produce outdoor-durable output. They can print directly onto rigid and flexible media of up to 48 mm (1.89 inch) thickness. The printer holds the media stationary while the printhead assembly moves across to create the print, eliminating image skew problems often associated with rigid stock feed systems. With the Roll Media Option installed the printers can also print on various roll media. See your local representative or visit http://mediaguide.oce.com/ for more details on recommended media.

Responsibilities of the Operator

The printer operator must be properly trained. Océ provides training for the operator in the use of the printer hardware and software at the time of installation. It is the customer's responsibility to ensure that only properly trained personnel operate the printer. Operators must be fully versed in the operation of ONYX ProductionHouse® . For any operator unfamiliar with its operation, ONYX ProductionHouse® training is required. Training courses are available; contact your local Océ representative.

The customer must also ensure that all operators are aware of the safety issues described in this manual. In particular, knowledge about the hazards of exposure to UV light and UV inks and the use of proper protective equipment is essential. Also, operators must always escort any visitors to the facility and ensure that they are not exposed to UV light or UV ink during their visit.

The operator or other trained personnel are expected to handle all user maintenance as detailed in the User Manual, and also replacement of consumable parts (except printheads). If your site has a technician in charge of printer maintenance, that person is the optimal candidate. While any trained operator may perform routine maintenance, the best maintenance results from familiarity with the printer's internal operation and history.

The printer requires daily printhead maintenance to ensure the highest print quality and longer life for the printheads. The printer design provides you easy access to perform this simple task and it is essential that printhead maintenance is performed at least once a day, and more frequently if needed. Periodic cleaning must be scheduled for some components

on a regular basis. A few minutes spent cleaning also helps to ensure optimal printer function and the highest quality prints.

It is the responsibility of the operator to try to eliminate simple problems before calling a service representative. But knowing when to call for service is also important. An untrained operator must not attempt to service the printer as this may cause further damage. When you have determined that a service call is required, call as soon as possible. See the Troubleshooting and Maintenance sections for more details.

Responsibilities of the Service Technician

Field service technicians must have Océ Display Graphics Systems service training. The service technician is responsible for all repairs, upgrading and modification requested by the customer or mandated by the Océ Display Graphics Systems Service and Support Group. The service technician who installs the printer will also provide training for the operator that covers all of the basic skills and safety practices required to operate the printer. Service personnel are furnished with proper tools for the installation and maintenance of the printer. In addition to the tools and custom kits, each engineer will have basic tools for proper maintenance and servicing.

Product Compliance

Introduction

This section provides the EMC FCC compliance information and points to the DGS web site for access to the official documents for all agency compliance standards that the Océ Arizona 550 GT and Océ Arizona 550 XT conform to. It also provides printer manufacturing and contact information and a list of any toxic or hazardous material in the printer.

Electromagnetic Compliance (EMC)

FCC Statement for Class A Device:

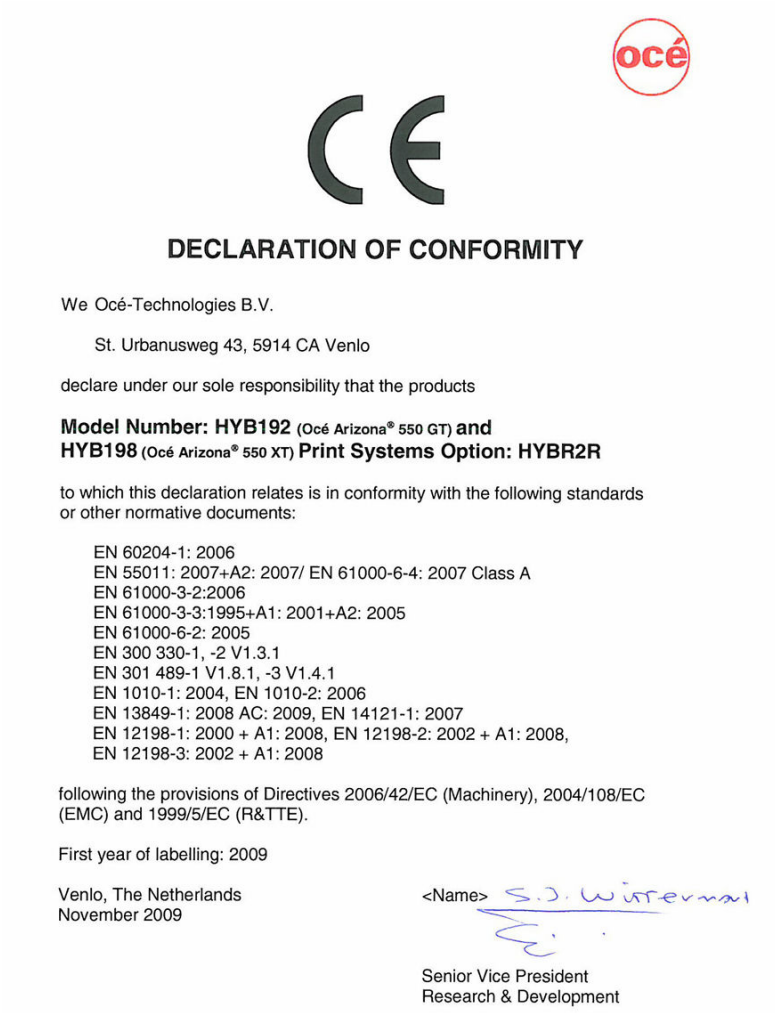
This equipment generates, uses and radiates radio frequency energy and if not installed and used as designed or intended, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class A computing device. This equipment has been designed to provide reasonable protection against such interference when operated in residential and commercial environments. Operation of this equipment in a residential area may cause interference, in which case the user, at his own expense, is required to take whatever measures are required to correct the interference.

FCC Notice: This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
1) This device may not cause harmful interference, and
2) This device must accept any interference received, including interference that may cause undesired operation.
Any change or modification not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This device contains an intentional radiator (RFID)
Radio Certificate Number: IC:6497A-3010105668
FCC Identifier: U2P-3010105668

Product Safety

The CE Declaration document is provided here for your convenience. This document and all other applicable compliance certificates are available for download from the Arizona Printer Customer Support section of our web site:
www.dgs.oce.com/.



océ

CE

DECLARATION OF CONFORMITY

We Océ-Technologies B.V.

St. Urbanusweg 43, 5914 CA Venlo

declare under our sole responsibility that the products

Model Number: HYB192 (Océ Arizona® 550 GT) **and**
HYB198 (Océ Arizona® 550 XT) **Print Systems Option: HYBR2R**

to which this declaration relates is in conformity with the following standards or other normative documents:

EN 60204-1: 2006
EN 55011: 2007+A2: 2007/ EN 61000-6-4: 2007 Class A
EN 61000-3-2:2006
EN 61000-3-3:1995+A1: 2001+A2: 2005
EN 61000-6-2: 2005
EN 300 330-1, -2 V1.3.1
EN 301 489-1 V1.8.1, -3 V1.4.1
EN 1010-1: 2004, EN 1010-2: 2006
EN 13849-1: 2008 AC: 2009, EN 14121-1: 2007
EN 12198-1: 2000 + A1: 2008, EN 12198-2: 2002 + A1: 2008,
EN 12198-3: 2002 + A1: 2008

following the provisions of Directives 2006/42/EC (Machinery), 2004/108/EC (EMC) and 1999/5/EC (R&TTE).

First year of labelling: 2009

Venlo, The Netherlands
November 2009

<Name> S.J. Wittevrongel

Senior Vice President
Research & Development

[1] CE Declaration

Noise Measurement Test Summary

Tested according to EN13023:2003, EN11204, ISO3744:1994(E)/ISO3746:1995(E) and declared according to ISO4871:1984(E)
Measurements taken at the sample in 5 different locations, Printer in normal operation with Vacuum Pump(s), does not exceed 80dB. For all locations, provide a noise protection enclosure or remove the pump from the printer location.

Manufacturer:

Océ Display Graphics Systems (ODGS)
13231 Delf Place - Building #501
Richmond, British Columbia
Canada V6V 2C3
http://www.dgs.oce.com/ Telephone (604) 273-7730 - Fax (604) 273-2775

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Toxic and Hazardous Substances or Elements in the Product

Part Name	Lead (pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent (CrVI)	Polybromiated biphenyls (PBB)	Polybrominated diphenylether (PBDE)
UV Curing Lamps	No	Yes	No	No	No	No
VGA Monitor	N o	Yes	No	No	No	No
Vacuum Guage Indicator	Yes	No	No	No	No	No

Part Name	Lead (pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent (CrVI)	Polybromiated biphenyls (PBB)	Polybrominated diphenylether (PBDE)
Linear Encoder Read-heads	Yes	No	No	No	No	No
Print-heads	Yes	No	No	No	No	No

Yes indicates that the substance is present in that printer component.
No indicates that the substance is NOT present in that printer component.

Chapter 2
Product Overview

Printer Specifications

Introduction

The Océ Arizona 550 GT and Océ Arizona 550 XT are flatbed inkjet printers capable of producing large format images on various rigid and flexible media. The printers comes standard with CMYK only, or can be ordered with the white ink option (CMYKW). The printers consists of a flatbed vacuum table and moving gantry. The material is held flat and stationary on the vacuum table during printing. The gantry contains a carriage that sweeps across the table as the gantry moves in steps along the length of the table to print an image on the media. In addition to the benefits of stationary positioning, the use of UV ink technology on rigid material eliminates finishing processes such as mounting and lamination. A Roll Media Option is available.

[2] Océ Arizona 550 GT Printer with Roll Media Option

Océ Arizona 550 GT Specifications

The Océ Arizona 550 GT and Océ Arizona 550 XT are part of a complete printing solution that includes: ONYX® workflow software (ONYX ProductionHouse™ recommended), optional Roll Media Option for flexible media printing, Océ ProCut flatbed cutter, Océ inks and other consumables, Océ media and Océ Professional Services. See Chapter 7 for Roll Media Option specifications.

Note:
The printers must be operated in accordance with the environmental conditions specified in the Océ Arizona Site Preparation Guide and also the safety requirements noted in this document. All specifications in this document are subject to change without notice.

Specifications

Feature	Specification
Printing Technology	Piezoelectric inkjet using Océ VariaDot™ technology: The Océ Arizona 550 GT and Océ Arizona 550 XT have two variable dot printheads per color, 8 in total (10 in total with the white ink option installed).
Format	True flatbed printer for rigid media with Roll Media Option for flexible media
Ink System	Océ IJC255 and Océ IJC256 UV-curable inks available in Black, Cyan, Magenta, Yellow, and White (if installed). Packaged in quick-change, 2 liter ink bags.
Maximum Media Size	2.5m (98.4") x 1.25m (49.2") or 3.050m (120.1") length for the XT model
Media Thickness	Maximum: 48mm (1.890")
Maximum Print Size	2.51m (98.8") x 1.26m (49.6") or 2.51m (98.8") x 3.06m (120.5") for the 550 XT
Media Weight	Maximum: 34 kg/sq.m (7 lbs/sq.ft)
Nozzle Drop Volume: Variable droplet sizes from 6 to 42 picol-itres	The ability to vary the drop size to as little as 6 picolitres produces sharp images with smoother gradients and quarter-tones. The ability to jet larger droplets up to 42 picolitres produces dense, solid colors. The result is near-photographic image quality. Text as small as 6 pt. is perfectly legible.
User Interface	LCD flat-panel monitor and mouse on a user-positioned podium.
Curing System	UV curing lamp with variable power settings.
Power Requirements Voltage: (Rated Current: 16A)	208 through 240VAC ±10% 60Hz Single Phase 200 through 240VAC ±10% 50Hz Single Phase 550 GT: 2 AC power supplies @ 16A Inlet 1 and 8A Inlet 2 550 XT: 2 AC power supplies @ 16A Inlet 1 and 16A Inlet 2 Recommended Circuit Breaker: North America 20A, European Union 16A.
BTU Output	10,000 BTU (2950 watts) under continuous operation.
Hardware Interface	USB, Ethernet TCP/IP, 100 base-T (or Gigabyte, if support-ed by the local network).
Image Processing Software	ONYX® ProductionHouse Océ Edition version 7 or greater (ONYX® PosterShop is not recommended).

Océ VariaDot™ Variable Droplet Imaging Technology

The Océ Océ Arizona 550 GT offers superior print quality and ink economy through the use of Océ VariaDot imaging technology, the next evolution in piezoelectric inkjet technology that enables a print head to produce droplets of varying volume. This differs from the current piezoelectric print head technology that is restricted to the use of fixed droplets. The use of variable sized droplets results in dots on the media of varying size (area) and density which in turn allows the use of four-color (CMYK) printing for all image features. Using Océ VariaDot imaging technology results in excellent print quality and a superior ink economy over 6-color printing systems.

Océ VariaDot imaging technology allows piezoelectric print heads to produce droplets of varying volume on demand. This allows the ONYX™ ProductionHouse software to specify the appropriate droplet size for each specific image feature. When imaging fine detail such as small type or fine lines, very small droplets can be used, when imaging areas of tonal transition or quarter-tone values such as skin tones drops of medium volume can be used and when printing areas of high density such as solid colors, large droplets can be used.

Océ VariaDot™ for Improved Image Quality

Océ VariaDot imaging technology can be compared to painting a room in your house. You use a large brush size for quick coverage over large areas and a much smaller, finer brush for detailed areas. Trying to paint a large wall with a tiny brush would result in many artefacts and trying to paint a fine fresco trim with a large brush would be very frustrating. In the same way, Océ VariaDot uses the appropriate size droplet for each specific image feature resulting in the best possible image quality in every part of the printed image.

Océ VariaDot™ for Reduced Ink Consumption

A significant benefit of Océ VariaDot imaging technology is that it allows the use of only four inks (CMYK) for all areas of the printed image. This is very significant to the user in terms of ink consumption per square meter because the current "de facto standard" in the industry is six-color piezoelectric printing. This older technology uses lighter versions of Cyan and Magenta inks, often referred to commercially as "Light Cyan" and "Light Magenta" to overcome the image quality problem previously associated with four-color (CMYK only) printing.

Chapter 3
Safety Information

Safety Guidelines for Ink Materials

Introduction

This section outlines the safety concerns involved with the handling and use of the UV ink and Flush for Océ Arizona printers. Read all of the material in this section and also review the Material Safety Data Sheet (MSDS) documents before handling any UV ink or using the printer. Always ensure that visitors are escorted and warned of the possible hazards from ink contamination.

Note:
The full text of the MSDS for all UV inks and Flush is found in the Customer Support section of the ODGS web site:
www.dgs.oce.com/

Caution:
Both UV inks and the curing lamps can be harmful if not properly handled. Follow these guidelines carefully in order to ensure maximum safety.

Personal Safety

The operator should wear nitrile gloves, a protective apron, and safety glasses with side shields when handling inks.

Note:
Warning for Seated Individuals- The UV Curing System on the Océ Arizona 550 GT generates hazardous levels of thermal, electrical and UV energies. UV light exposure is at it's worst for individuals in a seated position (Table Height of 90cm). Do not sit within 5 metres of the printer and do not look at the UV lamps if your eyes are positioned below the level of the printer table.

Ventilation and Room Volume

The printer should operate in an area where a good standard of general ventilation is available at 5 to 10 air changes per hour. Mechanical Ventilation must be added where the air changes are less than 5 per hour. See the Environmental Requirements section of the Site Preparation Guide for more details.

Handling UV Inks

Read and practice safety guidelines as outlined in the MSDS for each ink. Post these documents in the work area as required by prevailing law. MSDS for all inks are provided

when you purchase inks. The following is a summary of the important safety aspects of the MSDS that are common to all UV inks.

Hazards Identification

Dangers for people and environment	**Irritating to skin. Risk of serious damage to eyes. May cause sensitization by skin contact. Possible risk of impaired fertility. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment**
Avoid exposure	Inks are not suitable for food-related or children-related applications. Avoid contact with uncured ink.
Proper Curing	Set the lamp power as high as possible for each media to ensure that the ink cures properly. This will minimize the risk of irritation and sensitization of the skin from uncured ink.

First-aid Measures

General information	**Never make an unconscious person vomit or drink fluids. Immediately remove any clothing soiled by the product.**
After inhalation	Supply fresh air; consult doctor in case of complaints
After skin contact	Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
After eye contact	Rinse opened eye for several minutes under running water. Then consult a doctor.

Accidental Release Measures - Dealing With Spilled Ink

Personal Precautions and Equipment	Wear protective eyeglasses with side shields and use nitrile gloves. Keep unprotected persons away. Ensure adequate ventilation.
Measures for environmental protection	Do not allow product to reach sewage system or any water course. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.
Measures for cleaning/collecting	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as indicated in table Disposial Considerations (see below).

Handling & Storage

Handling	Information for safe handling: Store in cool, dry place in tightly closed receptacles. Keep away from heat and direct sunlight. Ensure good ventilation/exhaustion at the workplace.
Storage Conditions	Store in accordance with current national regulations Requirements to be met by storerooms and receptacles: Store between 5 - 30°C. Protect from heat and direct sunlight.
Storage Facility	Do not store together with oxidizing and acidic materials. Do not store together with alkalis (caustic solutions)

Personal Protection

Area	Strategy
Personal Protection	The instructions and information provided by the manufacturer of the personal protective equipment on use, storage, maintenance and replacement must always be followed.
General protective and hygienic measures	Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Store protective clothing separately.
Breathing equipment	Not necessary if room is well-ventilated.
Protection of hands	There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The selection of single or multi-use gloves is dependent upon the level of exposure (nitrile/neoprene gloves will last longer than latex/rubber). The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance. Always ensure that gloves are free from defects and that they are stored and used correctly. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Hands should be inspected on a regular basis for any signs of skin damage or inflammation.
Gloves	Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. In general, with the recommended nitrile gloves, replace the glove within a few minutes if it is contaminated with ink. Do not reuse single-use gloves Do not handle prints without gloves if ink is not properly cured.

Area	Strategy
Eye protection	Wear tightly sealed goggles
Body protection	Protective work clothing; disposable overalls are preferable. Acrylates, like any other organic solvent, are skin and/or eye irritants. Since acrylates do not evaporate, they will remain on the skin or clothes for extended periods. This long term exposure, caused by the non volatility, can give rise to dermatitis. It is essential that the measures given above are always followed.

Disposal of UV Ink

Disposal Considerations

Disposal Methods	All waste containing uncured or partly cured UV ink is hazardous and must be disposed of separately according to local regulations. Do not mix ink waste with non-hazardous waste (household, office, etc.). Do not allow it to reach sewage systems or drinking water supplies. Ink waste includes maintenance pads and cloths, gloves and any other material containing uncured or partly cured ink. Disposal must be made according to official local regulations.

UV Curing System Safety

Introduction

The UV Curing System on the Arizona printers generate hazardous levels of thermal, electrical and UV energies.

These printers use UV-curable ink that needs a high energy level of UV light to cure. The system is made up of two medium pressure mercury arc lamps attached to the carriage. The ink has been designed using the proper photo-initiator to cure at the highest efficient wavelength of the Lamp (366nm).

UV Lamp Hazards: Superficial eye damage and burning of the skin can occur with even brief exposure to UV light. Serious injuries can result from prolonged exposure, especially if unshielded. UV lamps operate at very high temperatures (approximately 800° Centigrade). For this reason, never touch a lamp which has been in operation. Let the lamp cool before attempting any maintenance, and then use extreme care in handling the lamp cartridges. The UV bulbs contain a small amount of metallic mercury which is toxic when ingested, handled, or breathed. Therefore, if bulbs are broken, care should be taken to clean up the spill immediately, and then disposed of according to local regulations concerning Mercury disposal.

Bare skin contact with the UV lamps must be avoided. Compounds from the skin when heated on lamps operating at 600 to 850° C will form permanent etching on the quartz surface that can decrease UV energy transmission. A contaminated lamp eventually may overheat, causing premature failure.

Ozone: Ozone is a toxic gas, which all medium pressure UV lamps create. As the lamp warms up, it briefly passes through a section of the light spectrum which excites oxygen molecules enough to create ozone. Once a UV lamp has completely warmed up, only very minute amounts of ozone are present.

Note:
A high concentration of ozone can cause irritation, headaches or nausea. Provide adequate ventilation as indicated in the Site Preparation Guide.

Note:
The printers have a built-in interlock safety system that shuts down the motion motors if the interlock is tripped. This ensures that the operator is not exposed to any hazards. The interlock system includes an aluminum safety gate around the perimeter of the carriage that reduces the UV light exposure and also stops carriage motion if it is not properly seated. See the section "*'Interlock Safety System'* on page 26" for more details on how it works.

Caution:

Warning for Seated Individuals: The UV Emissions and Blue Light Emissions profile of the Océ Arizona 550 GT is at its worst for individuals in a seated position (Table Height of 90cm). **Remove all chairs within 5 meters (16 feet) of the printer.**

Attention:

The UV Lamps contain Mercury. Dispose according to local environmental regulations.

UltraViolet and Blue Light Hazards Categories

UltraViolet Light Radiation Hazards Emission:
Effective UV-irradiance Emission Category of Océ Arizona 550 GT according to 7.1 of EN12198-1:2000 - Category 2.
Special restrictions and protective measures are essential when the printer is used in the workplace. Use the UV safety glasses with side shields supplied with the printer. Wear appropriate clothing that protects the skin from UV light exposure. Keep a distance of at least 1 m (3 ft) from UV lamps while printing.

Note:

Wear Industrial Protective Eyewear with lenses that block both UVA and UVB. Gloves and long-sleeved work clothes are essential to reduce the skin's exposure to UV emissions.

Blue Light Radiation Hazards Emission :
(Visible radiation in the range of 400nm to 700nm (Blue Light 300nm - 700nm)
Effective Irradiance respective the Effective Radiance Emission Category of Océ Arizona 550 GT, according to 7.1 of EN12198-1:2000 - Category 1.

Note:

Always wear protective eyewear with side shields when you work around UV lamps.

Interlock Safety System

Introduction

The Océ Arizona 550 GT printer has an integrated safety interlock system that stops all machine motion when a situation that might compromise operator safety occurs. The printer has three Emergency-Stop buttons: one on each end of the gantry, and one on the Control Station podium. Activating an Emergency-Stop button will switch the Safety Monitoring Relay input circuits. This causes the system to isolate the power to the motion control motors, and also turns off the Océ Arizona 550 GT curing system (UV lamps). The Maintenance Station and the Safety Gate on the carriage also have an interlock function. Beacons lights indicate the status of the safety system as explained in this section.

How the Interlock System Works

All system Interlock circuits operate as one. This means that any open interlock switch and/or Emergency Stop switch kills motion ability in all system electronics. Drive(s) needed for media loading purposes are exempt from this requirement. Both System PCB's contain the same Safety Interlock Circuit that functions as a single unit. However, an over-current condition in the Drive circuit on one PCB can disable itself without the knowledge/action of the other PCB's.

Emergency Stop Function:
There are three Emergency Stop buttons, one is located at the Operator Control Station, and one at each end of the Gantry. The fourth Emergency Stop is the AC power Supply Disconnect. Motion Motors that are disabled include the Gantry Drive, Carriage Drive, Z-Axis Drive (Carriage up and down movement), all Ink and Maintenance Pumps, Heaters, Table Vacuum Pump, and UV Lamps (not UV Cooling Fans).
Upon release (reset) of an Emergency Stop, no motion may be initiated without acknowledgment of the Operator, i.e. User interface message on the LCD display with Operator intervention acknowledgment. To re-activate the printer after you press an Emergency Stop button, turn the button counter-clockwise. If the printer has encountered an error, you must correct that error first. Errors are displayed on the LCD panel that is part of the Control Station. When the error is corrected, release the Emergency-Stop button, acknowledge the User interface message and continue printer operation.

Maintenance Station Interlock Function:
The Maintenance Station is located under the carriage and provides access to clean the printheads. Carriage and Gantry motion motors are disabled and UV lamps are turned off (if they were On), when the station sliding door is open. This includes the Gantry Drive and Carriage Drive. Interlock system is automatically reset when sliding door is closed. No User interface message with operator acknowledgment is required to re-enable function of the printer.

Safety Guard Interlock Function:
The Safety Guard is an aluminum fence around the perimeter of the carriage. Motion Motors disabled when it is not properly seated include the Gantry Drive and Carriage

Drive. Also UV Lamps switch Off (Not UV Cooling Fans), and Z-Axis drive initializes (Carriage drives to Top Position and Holds there).
Carriage Interlock must be cycled to ensure the Interlock is functional and that the Carriage Safety Guard is in place. User interface message with user intervention acknowledgment is required to re-enable functioning.

Power-up Interlock Test for Carriage
On power-up, the Interlock System will not permit the motion motors to be turned, so the machine will be unable to initiate motion. To satisfy the requirements for Machinery Directive, the Carriage Interlock must be cycled to ensure the Interlock is functional and that the Carriage Safety Guard is in place. Upon cycling of Carriage Interlock, no motion may be initiated without acknowledgment of the Operator, i.e. User interface message with operator intervention acknowledgment.

Beacon Light Status

The green beacon light is mounted to the top surface of the printer carriage. The purpose of this light is to indicate basic printer status to the operator.
Beacon off: indicates the printer can be approached without caution. The machine cannot initiate movement since the interlock Safety System has disabled all motion to the electrical control system.
Beacon on: indicates the Machine is powered up and ready to initiate motion. This tells an operator to approach the machine with caution, because it could initiate motion at any moment.

Océ Arizona 550 GT Safety Labels

Introduction

The safety labels are placed at strategic locations on the printer to warn the operator of possible dangers and hazards. It is important to be aware of the meaning of these labels to ensure safe operation of the printer.

Caution:
Read and understand all of the safety label descriptions in the table below before operating the printer.

Safety Labels

Safety Labels

Description	Label
Warning: UV Light Hazard. Avoid looking directly at UV lamps. Located on carriage cover to remind the operator that looking at the UV light source is dangerous. Wear protective eye-wear with side shields, gloves and long sleeves when using this printer. Ultraviolet Light Radiation Hazards Emission: Effective UV-irradiance Emission Category according to 7.1 of EN12198-1:2000 - - Special restrictions and protective measures are essential when the machine is used in the workplace.	
Wear Safety Gloves Located on the maintenance station as a reminder to always wear gloves when handling ink.	
Risk of Eye Injury. Wear Eye Protection - Located on the maintenance station as a reminder that the UV-curable ink is harmful to the eyes and skin. Always wear glasses and gloves when handling ink.	

Description	Label
Machine lockout: a reminder to turn off and lock out the AC power switch before servicing any electrical components. Located on the mains power switch.	
Warning: Electric Shock Hazard Located on the door to the electronics enclosure, the UV lamp power supply cover, the carriage cover, and the vacuum pump enclosure. This area can only be accessed by a trained service technician.	
General Warning Located on the AC enclosure cover. This area can only be accessed by a trained service technician.	
Pinch Point A reminder that horizontal movement of the carriage can create a pinch hazard as it moves along the gantry. Located on both ends and the rear of the carriage.	
Crush Hazard: Keep hands clear while operating. A reminder that vertical movement of the carriage can be a crush hazard if hands or objects are placed in these locations. Located on the maintenance station and both ends of the gantry.	
Thermal Hazard Radiated heat from the UV lamps can cause burns. Located on the carriage near the two UV lamps.	
Caution: For Continued Protection Against Fire And Electric Shock Replace Only With Same Type and Ratings of Fuse	
Caution: Disconnect Power Before Changing Fuse. Refer to the section "How to Power the Printer On and Off"	 [13] Disconnect Power

Description	Label
Electrical Shock Hazard Equipment Powered by two power cords. Turn off power switch or remove both power cords before servicing Refer to the section "How to Power the Printer On and Off"	 [14] Electrical Shock Hazard
Warning: High Leakage Current Earth Connection Essential Before Connecting Supply Refer to the Arizona Printer Site Preparation Guide.	 [15] High Leakage Current
Danger: High Voltage Warning that High Voltage is present behind marked panel.	 [16] High Voltage
Warning: Isolate Power Before Servicing. Refer to the section "How to Power the Printer On and Off" and sub-section "How to Lock Out the Power Switch".	 [17] Isolate Power
Warning: Line Voltage Always Present Warning that High Voltage is present behind marked panel at all times, even when machine is turned off	 [18] Line Voltage Present
Warning: Moving Gantry If the green beacon light on top of the carriage is on, the gantry may start moving at any time.	 [19] Moving Gantry

Description	Label
No Step Do not step on the table strut. If pressure is put on the table strut it can bend and thus affect the level of the printer table and therefore print quality.	 [20] No Step on Strut
PE - K GND Protective Earth Identification.	 [21] PE-K

Safety Awareness

Introduction

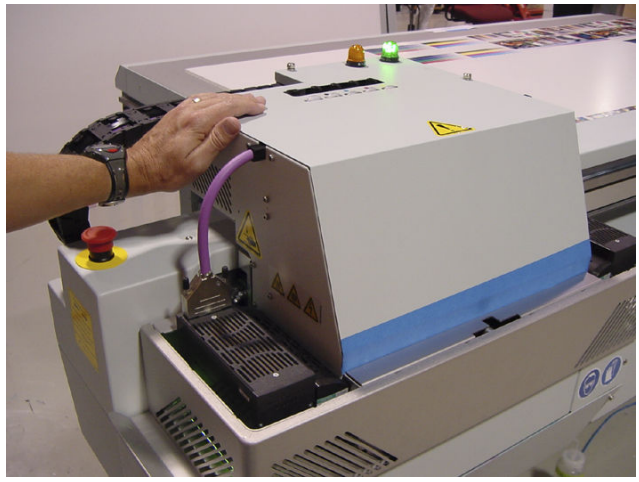
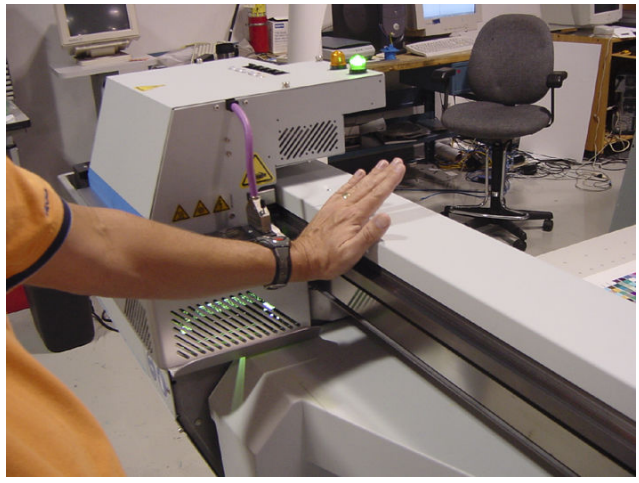
This section contains two sets of principles that must be followed to assure maximum safety when operating your Océ Arizona printer. The first set uses negative examples to show you things to avoid in order to prevent injury to the operator. The second set of principles illustrates some of the residual risks that are inherent in the operation of the printer. These are situations or physical aspects of the printer that may present a potential danger to the operator, but would compromise the capabilities of the printer if changed. Therefore, they are pointed out as a precaution the operator must be aware of when using the printer.

Attention:
The photos in the following table illustrate situations that must be avoided when operating your printer.

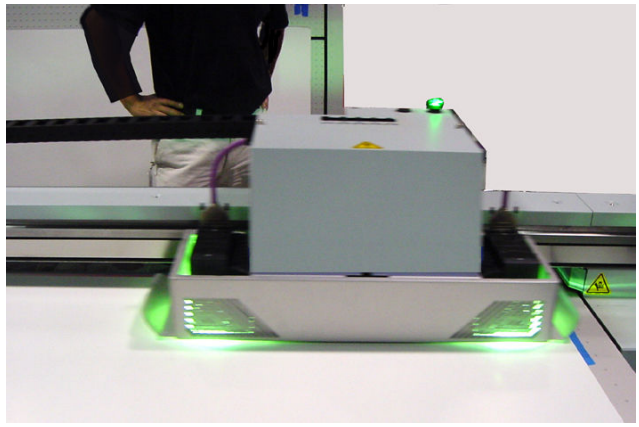
Situations and Actions to Avoid

How NOT to use the printer

Avoid these Situations For Your Personal Safety	
[22] Keep the table clear	Do not place your hand in the carriage pathway when printer power is on. Do not leave any objects on the table printing surface, except for media that you will print on. Also make sure the media is 48 mm (1.89 inches) or less in thickness.

Avoid these Situations For Your Personal Safety	
 [23] Avoid Carriage	Do not push or force the carriage to move manually if it is already in motion. If you do move the carriage, a Motion Error message will display and you will have to use the mouse to click Reset on the user interface LCD display.
 [24] Do not push gantry	Do not push or force the gantry to move manually if it is already in motion. If you do move the gantry, a Motion Error message will display and you will have to use the mouse to click Reset on the user interface LCD display.

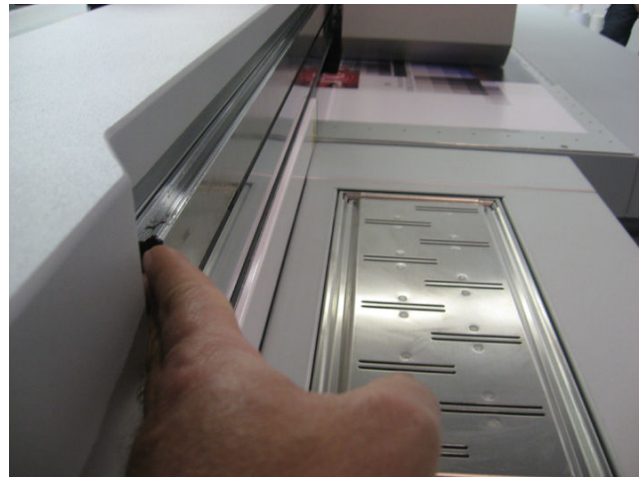
Avoid these Situations For Your Personal Safety	
 [25] Hot UV Lamps	When the Maintenance Station is open to perform printhead maintenance, do not touch the UV lamp assembly as it can be hot. Also be aware that the carriage will move up or down when the Raise Carriage switch is pushed.
 [26] IGUS Hazard	Avoid placing fingers, hands or other objects in the IGUS track unless power is off and the printer is locked out.

Avoid these Situations For Your Personal Safety	
 [27] UV Lamp Hazard	Keep a distance of at least 1 m (3 ft.) to the UV light when printing. Avoid looking at the UV lamps, especially if you are seated at the same level as the carriage. Do not sit within 5 meters (17 feet) of the carriage path. Also do not touch the UV lamp assembly or the surrounding guard as they will be hot and may result in burns of the skin.

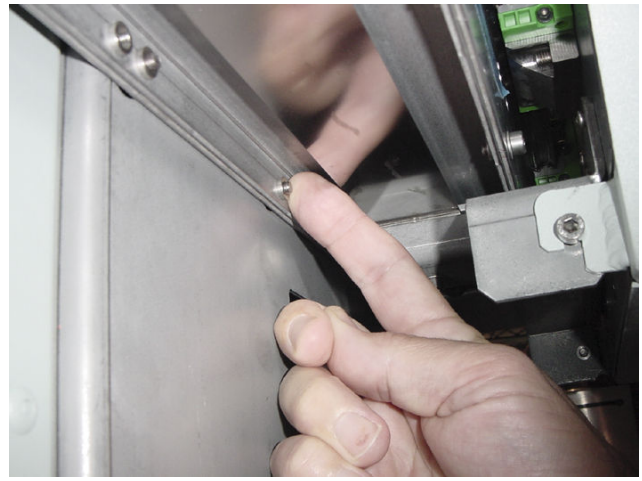
Residual Safety Risks

Your Océ Arizona printer is engineered to minimize machine components and operating procedures that may compromise operator safety. However, in order to maintain some machine operations and functionality, certain compromises are required. The following table documents some of these residual hazards. By making the operator aware of the potential risks, we hope to ensure maximum safety in the operation of this printer.
Caution: there may be a time lag between when a print job is issued and when the gantry movement actually begins as the UV lamps must warm up first. Movement can start many minutes after a print job is sent.

Arizona Printer Residual Risks

Residual Risk Area	Hazard
A high risk crushing hazard is created by the movement of the carriage and gantry supports. Keep hands away from this area unless the printer power is off.	[28] Carriage guard and 45° guard on Gantry Supports
A crushing hazard is created by the movement of the carriage along gantry rails. Keep hands away from this area unless the printer power is off.	 [29] Carriage Guard and Gantry Rails

Residual Risk Area	Hazard
A high risk crushing/pinch hazard is created by the table and the gantry.	 [30] Table/Gantry Pinch hazard
A high risk crushing/pinch hazard is created by the table and the carriage.	 [31] Table/Carriage Pinch Hazard

Residual Risk Area	Hazard
A high risk crushing/pinch hazard is created by the carriage and the gantry when the Z-Axis is moving (carriage moves up or down).	[32] Carriage Vertical Movement Pinch Hazard
A high risk shearing hazard is created by the carriage and the gantry frame from the bottom.	 [33] Shear Hazard

Residual Risk Area	Hazard
A high risk shearing hazard is created by the carriage and the gantry frame.	 [34] Shear Hazard
Entanglement hazard A medium risk of finger or material entanglement is created by the web assembly (IGUS track).	 [35] IGUS Impact Hazard

Residual Risk Area	Hazard
A medium risk impact hazard is created by the carriage when cycling from left to right.	[36] Carriage Impact hazard
Heat hazard: the UV lamp assembly and the surrounding guard can be hot.	[37] UV Lamp Heat Hazard

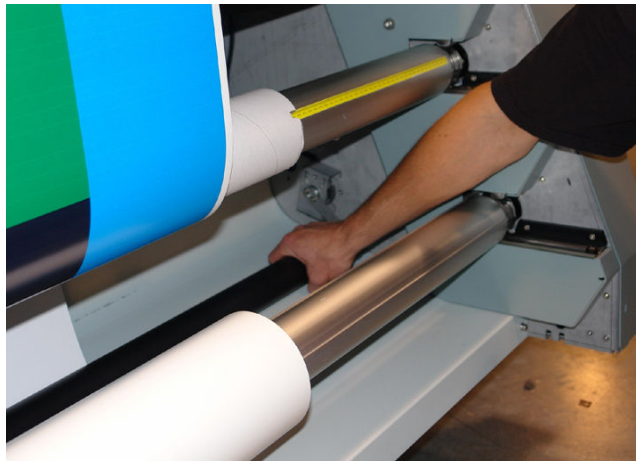
Roll Media Safety Awareness

Introduction

This section contains two sets of principles that must be followed to assure maximum safety when operating the Roll Media Option (RMO) for your Arizona printer. The first image uses a negative example to show you a situation to avoid in order to prevent injury to the operator. The following images illustrate some of the residual risks that are inherent in the operation of the printer. These are situations or physical aspects of the printer that may present a potential danger to the operator, but would compromise the capabilities of the printer if changed. Therefore, they are pointed out as a precaution the operator must be aware of when using the printer with the Media Roll Option.

Situation and Action to Avoid

How NOT to use the Roll Media Option

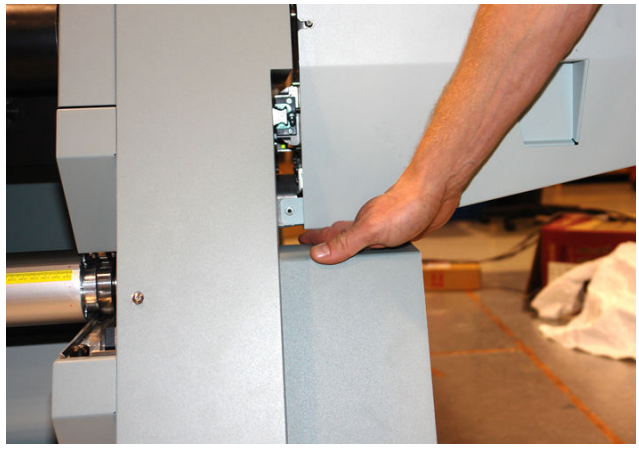
Avoid these Situations For Your Personal Safety	
	Do not place your hands near any of the media shafts or the media tension bar when the printer is printing.

Residual Safety Risks

Attention:
The photos in the following table illustrate residual risks that must be avoided when operating the RMO with your printer.

The Roll Media Option is engineered to minimize machine components and operating procedures that may compromise operator safety. However, in order to maintain some machine operations and functionality, certain compromises are required. The following table documents some of these residual hazards. By making the operator aware of the potential risks, we hope to ensure maximum safety in the operation of this printer.

RMO Residual Risks

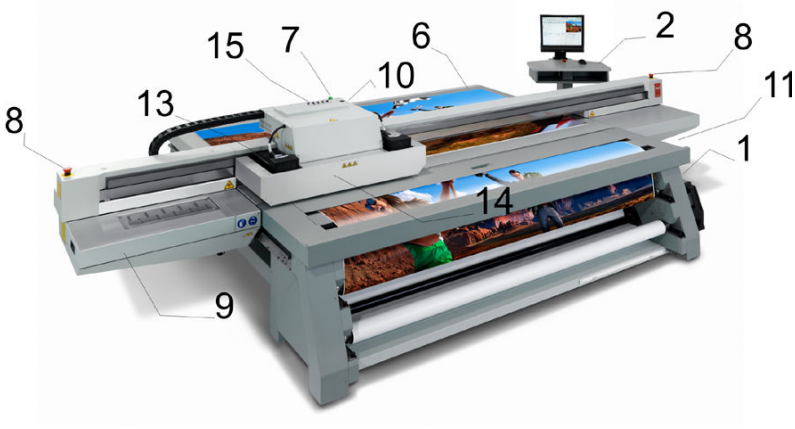
Crushing/Shear Hazard	
	Do not place your hand near the shaft drive motors when the printer is printing or when the dual foot controls are pressed.
	Do not place your hand on the Media Roll motor enclosure when the green beacon light is On as the gantry may move at any time.

Chapter 4
How to Navigate the User Interface

Operator Interface Hardware

Introduction

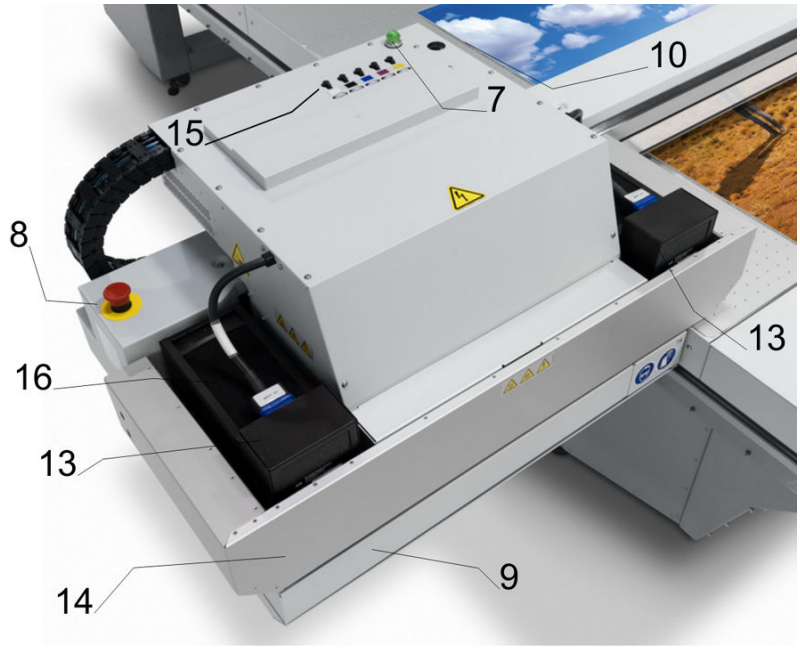
The Operator interacts with printer components to print, maintain, and monitor the state of the printer. This section identifies and explains the functions of the hardware.



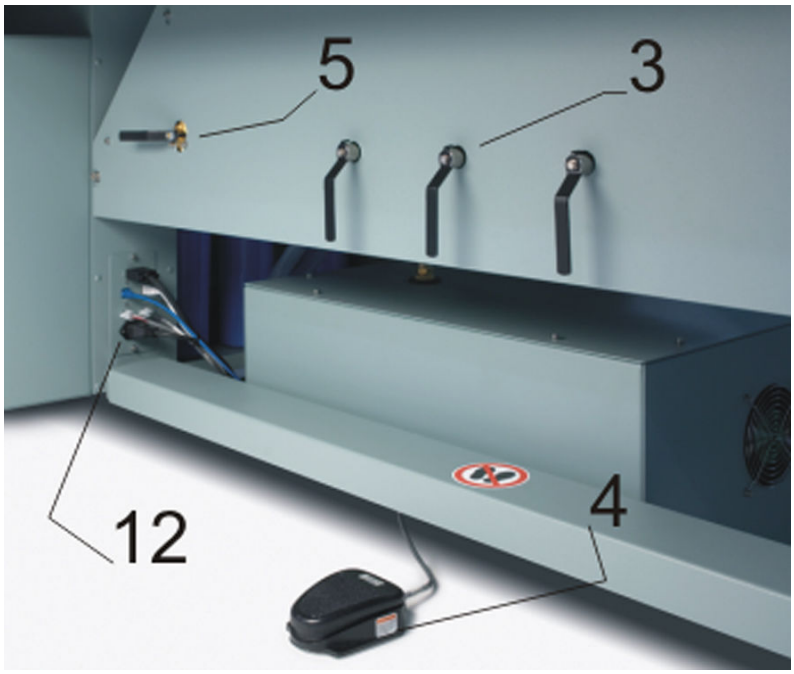
[41] Printer Hardware

(1) Main Power Switch	(9) Maintenance Station
(2) Operator Control Station	(10) Coolant Reservoir Level
(3) Vacuum Zone Control Handles	(11) Ink Filters
(4) Vacuum Table Foot Pedal	(12) Control Station Panel
(5) Vacuum Bleed Valve	(13) UV Lamp Housing
(6) Print Button	(14) Carriage Guard
(7) Printer Status Light	(15) Ink Purge Valves
(8) Emergency Stops	(16) UV Lamp Filter

Illustration



[42] Océ Arizona 550 GT Carriage Hardware



[43] Vacuum System Hardware

Operator Interface Components

Hardware Interface Components

Component	Function
1) Main Power Switch	The Océ Arizona 550 GT has an AC power switch that turns the printer On and Off. The switch also serves as a lock-out device. It also has an AC power connector. All of these power-related items are located on the end of the electronics enclosure.
2) Operator Control Station	The operator control station consists of a podium stand, an LCD display monitor, a mouse, and an emergency stop button. The station allows the operator to control the printer's onboard computer system by way of the Operator Interface software displayed on the LCD monitor. Print jobs are sent to the printer's hard drive from the host computer over an Ethernet network.
3) Vacuum Zone Control	The three vacuum zone control handles determine which of the three print zones on the printer table will have vacuum applied when the vacuum pump is switched on. The vacuum zones are opened or closed by the handles.

Component	Function
4) Vacuum Table Foot Pedal	A vacuum foot pedal switch is provided to facilitate the process of securing the media on the vacuum table. The foot pedal toggles the table vacuum on/off. The vacuum must be turned on prior to starting a print.
5) Vacuum Bleed Valve & Gague	A bleed valve can be adjusted to reduce or increase the amount of vacuum suction on the media. Less vacuum reduces artifacts caused by suction when imaging on flexible media.
6) Print Button	The print button is located at the corner where media is loaded on the table. After positioning the media and activating the vacuum, press the button to start the print.
7) Printer Status Light	The green colored beacon light is mounted on the top surface of the carriage. The purpose of the light is to indicate basic machine status to the operator. See the table after this section for the significance of the different states of the light.
8) Emergency Stops	If a situation requires an immediate shutdown of all printer activity, press one of the three Emergency Stop buttons. To recover from an emergency shutdown, resolve the problem that prompted the shutdown and then release the Emergency Stop by twisting it slightly clockwise. Restoring functionality to all disabled systems can only occur through an operator command at the Control Station. See below for the parts of the hardware interface affected by an Emergency Stop.
9) Maintenance Station	Daily printhead maintenance consists of an ink purge and suction cleaning of the printheads. The maintenance station cover is slid open to access the printheads and the suction nozzle. The maintenance station is located under the carriage. Maintenance is performed when the carriage is parked at the end of the gantry.
10) Coolant Reservoir	The coolant reservoir is mounted in the carriage. The operator has the ability to refill the reservoir and to monitor the level of coolant at this location. See Maintenance section for instructions.

Component	Function
11) Ink Filters and Ink Bay	The ink filters ensure that ink flows easily and is free of particulate matter. These filters must be changed periodically to ensure that they are working efficiently. See the Maintenance section, How to Change Ink Filters for a schedule and instructions. The Ink Bay contains 2 liter bags of each color (CMYK) of ink. The ink bay is located on the side of the table in the corner where media is loaded. ID tags ensure the correct ink color is installed in the correct location and that expired ink is not installed. A warning is issued to the operator when a specific ink bag is empty and needs to be replaced.
12) Control Station Panel	This panel contains all of the receptacles for connections from the printer to the Operator Control Station. This includes power and video for the LCD display, an Ethernet network cable plug for communication and data transfer from the host computer, a cable to the Emergency stop and a USB cable for the mouse on the Control Station.
(13) UV Lamps	Two UV lamp are used to cure the ink. UV lamps have a finite life and must be changed periodically. The lamps contain mercury and must be disposed of according to local environmental regulations.
(14) Carriage Guard	The Carriage Guard protects the Operator from exposure to UV light and it also protects the lamps and the carriage by stopping all motion if it encounters an obstacle in the path of the carriage.
(15) Ink Purge Valves	On top of the carriage are ink purge (vacuum shut-off) valves that can be shut off to avoid ink drips when the printer is turned off. They also allow longer purges to select printheads (those not shut off).
(16) UV Lamp Filter	If the UV lamp filters get clogged with dust and debris the lamps can overheat. Change the filter each time you change the UV lamp bulb. Check the filters at least one time every week and clean as needed . See "How to Clean the UV Lamp Filter" in the Maintenance chapter.
(17) Waste Tray	The waste ink tray is located below the printhead maintenance station. A manual valve allows the operator to drain the waste ink to a portable container for disposal .

Status of Beacon Light States

The status light indicates the following printer status to the operator.

Status Light

Beacon Status Light	Definition	Possible Conditions
Green Off	Printer interlock system or the emergency stop buttons have been triggered. No motion can be initiated.	Maintenance station door has been opened or one the emergency stop buttons has been triggered.
Green On	Printer is functional and ready to initiate motion.	

Emergency Stop Effects

Note:
There are three Emergency Stop buttons, one on the control station podium and one on each end of the gantry. The AC power On/Off switch can also function as an emergency stop. There are more details on the Emergency stops in the Interlock section *'Interlock Safety System'* on page 26.

Activating an Emergency Stop will disable the following:

- Carriage motion
- Gantry motion
- UV curing lamps
- Ink pumps
- Thermal fluid (coolant) pump
- Thermal fluid heater
- Purge pump
- Purge valve
- Printheads jetting

Printer Interface Software

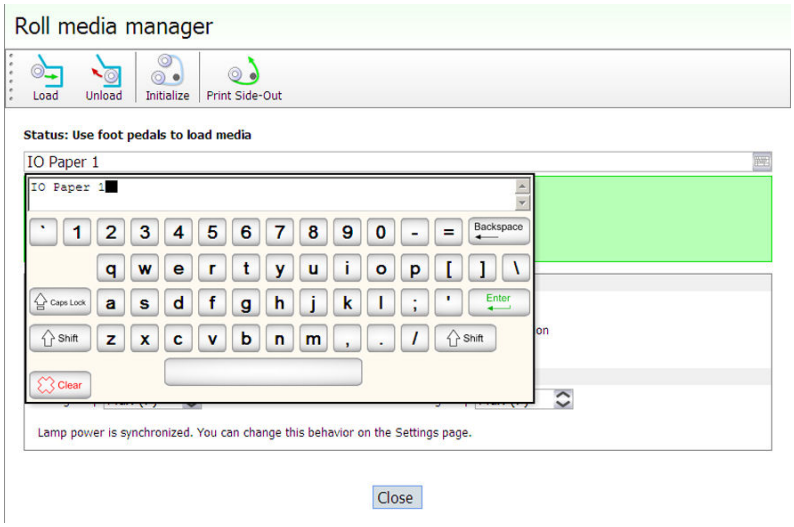
Introduction

The printer software is displayed on the LCD monitor. The interface has six main modules that are accessed by tabs located at the bottom of the display. Click on these tabs to access the modules. Print Job Control is the default module displayed when the software has finished loading after the printer is switched on or reset.

The Print Job Control display is divided into functional and status areas. The functional areas supports all operator input necessary to operate, maintain and service the printer. The status areas are used to report printer status.

Onscreen Keyboard & Numeric Keypad
A mouse is used as the input device to navigate the menu-based interface. For operations that require operator input, the mouse is used to select either numeric characters from a virtual keypad or alphanumeric charaters from a virtual keyboard. These virtual input screens are displayed on the interface LCD monitor when data entry is required.

Illustration



[44] Virtual Keyboard

Operator Interface Module Tabs

[45] Interface Tabs

Interface Modules

Component	Function
Print Job Control (Print tab)	Provides management of all aspects of working with print jobs. It also controls some features of the printer and provides access to Roll Media print controls (if that option is installed).
Printer Counters (Counters Tab)	Provides information about the amount of ink consumed, the amount of media printed and the number of print jobs started. Also provides counters for the UV lamp bulbs use.
Printer Settings (Settings tab)	Displays information about, and also allows you to change various aspects of the printer: Date and Time, Network Connections, User Interface, Printer Settings, and Roll Media Settings (if that option is installed).
Service and Diagnostics	This area is reserved for use by trained field service technicians only.
Tools and Utilities (Tools and Utilities tab)	Provides access to the Shutdown, Job Manager, Special prints, Ink Flush Procedure, Spit Catcher Alignment, and System Log files. **Shutdown** properly closes the printer software in preparation for powering down the printer. **Job Manager** allows you to perform a bulkcleanup of print jobs (e.g., select all jobs then delete them). **Special Prints** provides various special adjustment prints, table ruler images, a quality control Reference print image, and the Nozzle Check print. **Ink Flush** clears the selected color ink line. **Spit Catcher Alignment** is used to align the carriage over the spit catcher to support white ink or IJC256 ink. **System Logs** allows the operator to generate log files for service diagnostics and troubleshooting.
Software Upgrade (Upgrade tab)	Allows you to update the printer to the latest version of the printer software and firmware.

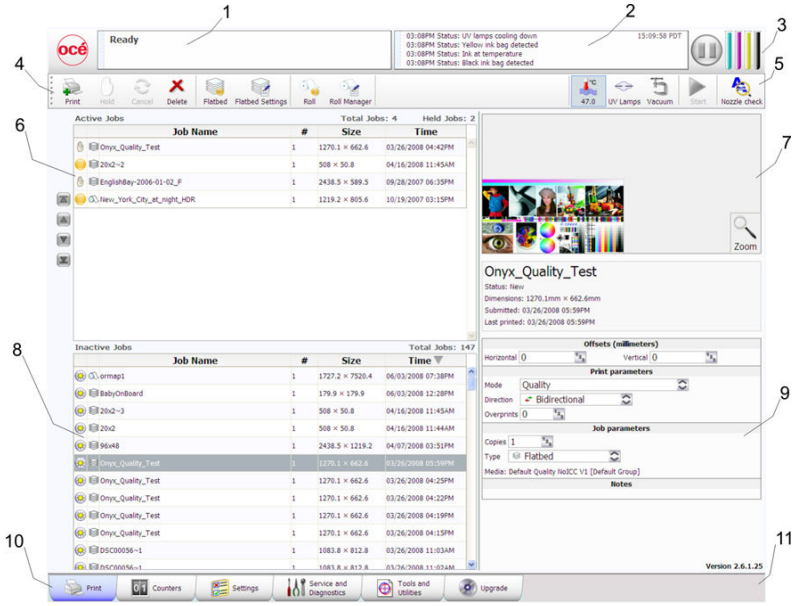
Print Job Control Module

Introduction

Print Job Control is the first module displayed when the printer software is loaded. From this module you can manage all aspects of working with print jobs and also control many features of the printer. The table "Job Control Panels" documents the numbered callouts and the rest of this section explains each of these areas in more detail.

The Print Job Control display is divided into functional and status areas. The functional areas supports all operator input necessary to operate, maintain and service the printer. The status areas are used to report image and printer status.

Illustration



[46] Print Job Control

Components of the Print Job Control Module

Job Control Panels

Component	Function
1) Job and Printer Status	Displays the status and progress of print jobs
2) Printer Messages Panel	Displays the last four lines of the log - click in this area to see more of the log.

Component	Function
3) Pause/Resume and the Ink System Status	To the right is the print job Pause/Resume button and the Ink System Status icon - click to view an ink status report.
4) Command Toolbar left	Displays icons for actions related to the print jobs and control of the printer.
5) Command Toolbar right	Displays icons for ink temperature, lamp control, start print jobs, and print a nozzle check.
6) Active Jobs List	Displays a list of all Active print jobs.
7) Job Placement Preview	Displays the selected print job with a preview that shows the placement of that job on the printer.
8) Inactive Jobs	Displays a list of all Inactive print jobs.
9) Job Information and Parameters panel.	This panel shows the parameters of the currently selected print job and also allows changes to the parameters associated with that job .
10) Interface Tabs	Use these tabs to select the different modules of the printer user interface.
11) Software Version Number and Image Upload Progress	Displays the current installed version of the printer software. The image upload progress panel indicates the name of a print job that is currently uploading to the printer. This panel is not always visible and appears only when an image is loading to the printer. It is located below the software version number when it is active.

Job Control Components Explained

1) Job and Printer Status Panel

The job status panel is in the top left corner of the display screen. It shows information about the current state of the printer or job activities.

- Printer Status
- Job name currently printing
- Total copies, number of printed copies and copy progress
- Overprint progress and number of overprints if more than zero

All incoming jobs go directly into the job list or job queue.
Selecting a job in the list highlights the job and updates the job information area.
The job information area contains offsets, print quality mode information, number of copies and overprints, and the name of the ProductionHouse profile used and the image to be printed is also displayed.
Jobs can be moved up or down in the list and can either be printed, held or canceled.

2) Printer Messages (or Log) Panel

The printer status panel is in the top right corner of the display. It shows the last four lines of the printer log that contains printer errors, warnings, and information messages. To see more of the log, click on the panel to bring up a new window that allows you to scroll through the log.

3) Pause and Ink Status

Pause/Resume print button. This button can be used to pause or resume a print job. It is active only while a job is printing.

Note:
Use of the Pause/Resume button may cause artifacts in a print because of the uneven curing of the ink if the job is paused. Do not use this unless it is essential that the print job is paused.

Ink System Status. Click the icon to open an ink system status dialog that displays ink-related information. This includes for each color of ink: an expiry date, ink type code, ink bag status, fill status (whether ink is being pumped into the reservoir), and whether the reservoir is full. The dialog also shows the current printhead temperature, the meniscus vacuum level, and the purge pressure.

4 & 5) Command Toolbar
The printer toolbar contains buttons that allow you to interact with the printer (listed in the table below in the order they are displayed on the command toolbar). Note that some of the buttons have a checked and unchecked state with a different appearance of the icon image to reflect their state.

[47] Command Toolbar

Print job	This command can do the following actions depending on context: ■ Activates a selected inactive job by moving it to the active list. ■ Un-holds a held job. ■ Un-holds an job that had an error currently.

Hold job	The command can do following actions depending on context: ■ Puts an active job on hold. ■ Waits until the printer finishes a currently printing copy and puts the job on hold.
Cancel job	The command can do following actions depending on context: ■ Deactivates a selected active job by moving it to the inactive list. Note that Special Prints will not move to the inactive list. ■ Cancels a currently printing job and moves it to the inactive list. Note that the first click cancels the print, but the carriage will continue to apply curing passes so that the ink cures properly. A second click terminates the print job immediately and gives a warning about uncured ink.
Delete job	Deletes a job from the printer. However, you cannot delete a job that is currently printing.
Flatbed icon	Process flatbed jobs toggle command - Allows printer to process flatbed jobs. This must be selected to enable flatbed printing when the printer is booted or after re-setting the printer due to an error.

Flatbed Settings	A dialog window automatically appears when confirmation is required. If it is closed before you select Confirm, it can be reopened by clicking on this button. **Media Parameters** Enter or confirm the thickness of the media. The printer will automatically adjust the carriage height to media thickness and also the print gap. Media thickness confirmation is required only for the first copy of a print job, unless it is changed during printing. If the media thickness value is changed while printing, confirmation is requested before printing the next copy. If you use a media underlay (*'Underlay Board to Reduce Artifacts'* on page 101) click on that box to add its thickness to the overall media thickness. If the underlay has a different thickness than the one shown, then change that value in the Printer section of the Settings module. **Lamp Power Control** Allows the operator to control the power output of each UV lamp independently. To extend lamp life, use the lowest setting that provides adequate curing for a particular media. Leading and Trailing Edge are relative to the direction of carriage travel. When enabled, this feature automatically matches the power of the trailing UV lamp, when power of the leading UV lamp changes. It is still possible to adjust the power of the trailing UV lamp individually, when this setting is enabled. To enable or disable this setting, see the User Interface section of the Settings page.
Roll enable	Click on the Roll icon to enable or disable the Roll Media Option print queue (this allows you check media parameters before the job actually prints). Roll media print jobs will not print unless this icon is selected. *Note:* Roll media print jobs do not require explicit user actions to start the print job once Roll module is initialized (see Roll Media Manager) If this icon is selected, and the job status is not on Hold, roll media print jobs will start automatically when the printer receives the job.
Roll Media Manager	The Roll Media Manager allows the operator to load and unload media and to initialize the Roll module so that the tension on the roll media is set and the job is ready to print.

Ink Temperature Control	This button controls the ink heater and also displays the ink temperature. The state of the button reflects the status of the ink heater. The heater times out after two hours of inactivity (time can be changed up to four hours by a service technician). If the ink heater is turned off when the timeout period has expired, the button changes its status to unchecked. The print heads must be at operating temperature (47°C - 116°F) before a job will start printing. *Note:* If this button is flashing, it indicates an error. Click on the Ink Status button to check the ink system.
UV Curing Lamp Control Button	This button controls the UV curing lamps. The state of the button reflects the state of the lamps. The UV lamps will timeout after 15 minutes of inactivity (time can be changed by a service technician). If lamps are extinguished when the timeout expired, then the button change its status to unchecked. If lamps are off before the print starts, then lamps are turned on automatically and the button would reflect the state accordingly.
Table vacuum button	This button controls the table vacuum and duplicates the function of the table vacuum foot switch. The button reflects the actual state of the table vacuum. There is an automatic timeout that will turn the table vacuum off. The actual time is set in the Settings module under printer. *Note:* Once turned off, vacuum cannot be turned on again for approximately 5 seconds.
Start Button	This icon can be used to start a flatbed print job (same function as the physical button on the table).
Nozzle check	This button populates the active job list with a job that prints a nozzle check pattern. The nozzle check print is used to identify nozzle dropouts that can cause banding and other print quality problems. *Note:* For information on how to use the nozzle check to troubleshoot nozzle dropouts, see the Printhead Maintenance section in the Maintenance chapter.

6) Active Print Job List

The active job list consists of a table, job count summary on top and job order control buttons on the left. A job count summary displays total number of active jobs and number of jobs put on hold. Job order control buttons can be used to change order of jobs queued for printing. The active job list has the following features:

- All incoming jobs issued from the ONYX ProductionHouse workflow go directly into the active job list.
- After a job is printed it automatically moves from the active to the inactive job list.
- The operator can drag and drop jobs to move them between the active and inactive job lists (except for a job that is being prepared to print).
- All the jobs are stored locally on the printer hard drive.
- Selecting a job highlights the job and updates the job information area.
- Jobs can be moved up/down in the active list using the button on the left. Jobs can either be printed, held, canceled or deleted. Jobs canceled from the active list are moved to the inactive list.
- Deleted jobs are removed from the hard drive and are no longer accessible (except for Special Prints, which cannot be deleted).
- The current job being printed can be paused or canceled. A canceled job will move from the active to the inactive print job list.
- A job count summary displays the total number of active and inactive jobs and the number of active jobs on hold.

7) Job Placement Preview

The table placement preview shows the print location and a proportional representation of the image in relation to the table. The zoom button in the bottom right corner activates a popup preview window. If a preview image is not available, an approximately sized white box is used as a placeholder, and the zoom button is not displayed.

The preview image can be positioned by dragging it around the window (this will automatically update the offsets fields).

When an image is out of bounds in the actual table area, that area in the table preview is marked in red.

When an image is out of bounds in the bleed region, that area of the table preview is marked in yellow.

Roll media print jobs will display only the middle part of the image if it does not fit in the window. They can't be repositioned by dragging in the window.

8) Inactive Print Job List

Inactive job list consists of a table and job count summary on top. A job count summary displays total number of inactive jobs. The list can be sorted by clicking on the appropriate column header. The icons in the first column reflect the job type and status and can be

use to sort the list. The size column is sorted by image area. Date column is sorted by a compound value of date and time. The inactive job list has the following features:

- The operator can drag and drop jobs to move them between the active and inactive job lists.
- Jobs deleted from the inactive list are deleted from the hard drive.
- The operator can automatically set the status of a job to Hold when the job is put in this queue. This can be set separately for flatbed and roll media jobs.

9) Job information and parameters panel

The job information area displays only relevant job parameters of the current print job. For example, the Overprints field is not displayed for roll media jobs. Some of the parameters may be modified.

Offsets	A job's vertical and horizontal offset parameters can be changed with the mouse wheel when mouse cursor is positioned over the field. Rotate the mouse wheel up or down increments or decrements offset at the rate of one unit per notch. Hold the right mouse button and rotate the wheel increments or decrements at the rate of 10 units per notch. An alternate method to change parameter values is to click on the field and this brings up an onscreen keyboard so you can click on the numbers required. You can also use Preview to drag an image to the desired position.

Print Parameters	Displays information about the print job that is currently selected: ■ **Mode** - Print quality mode: Select Production, Quality, or Fine Art mode in ProductionHouse. When Quality mode is set, this field will have a pull-down box that allows you to select Quality-Matte or Quality-Density (or Quality-Layered if the White Ink option is installed). **Quality-Matte** provides a matte finish to the entire image. This is helpful on some media such as FomeCore, GatorPlast or Styrene as a glossy image tends to have a matte line at the end of each swath with these media. Quality-Matte resolves this issue. (Note: This mode is not available on 5xx printers). **Quality-Density** provides more density for backlit media. This is most useful when you print on roll media, since Overprint is only possible on flatbed jobs. Also for flatbed media that may warp or move slightly from the heat of the lamps, the Density mode will reduce that because it is done in one pass. ■ **Direction** - Bidirectional and Forward or Reverse unidirectional printing ■ **Overprints** - If the Overprint count is set to greater than 0 (zero), the printer will re-print the image again on the same piece of media. ■ **Copies** - use the mouse to increase or decrease. ■ **Type** - Print Method - Flatbed or Roll. ■ **Media** - Media that was selected in ProductionHouse. ■ **Notes** - Appears only if a note was specified for the job. Notes are entered in ONYX ProductionHouse.

10) Printer Interface Module Tabs

These tabs allow you to switch between different functional modules of the printer. Click on a tab to display the screen associated with each of the modules available.

11) Software Version Number and Image Upload Progress

Displays the version of the currently installed printer software.

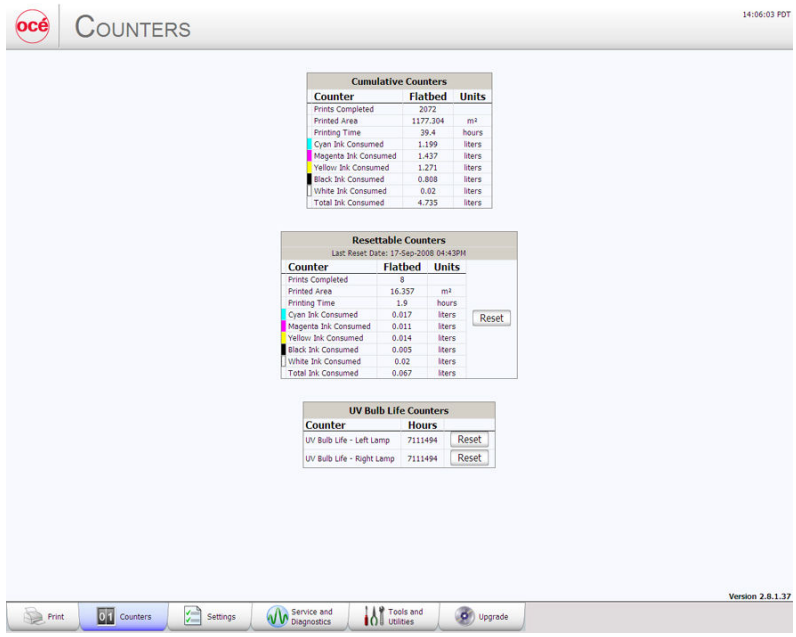
The image upload progress panel indicates the name of a job that is currently uploading to the printer. This panel only displays information while an image is transferred from the ProductionHouse computer.

Counters Module

Introduction

The Counters module displays counters that are of interest to the operator. It shows counters for each color of ink and the total ink used. It also shows the number of hours a UV lamp was used since last changed. Some of the counters can be reset.

Illustration



[48] Counters Module Screen

Component - function table

Counters Explained

Component	Function
Non-resettable Counters	These counters display a cumulative total of ink consumed or area printed over the whole life of the printer.
Resettable Counters	These counters display a cumulative total of ink consumed or area printed since the Reset button was last pressed. Time and date of last reset is displayed, if available.
UV Bulb Life	Displays the hours of lamp use since last reset. Always reset the count when you change a bulb.

Settings Module

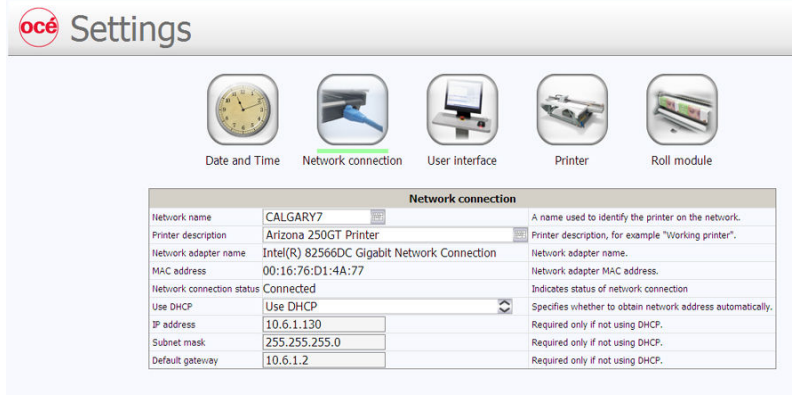
Introduction

The Settings Module allows you to review and change the date and time, network connection settings, user interface configurations, printer settings and, if installed, the Roll Media settings.

Date and Time Settings

[49] Date and Time

- Date - display only, cannot change the date
- Time - change the time of day, if required
- Whether Daylight Savings Time is set
- Time Zone - select the time zone for the printer location



[50] Network Connections

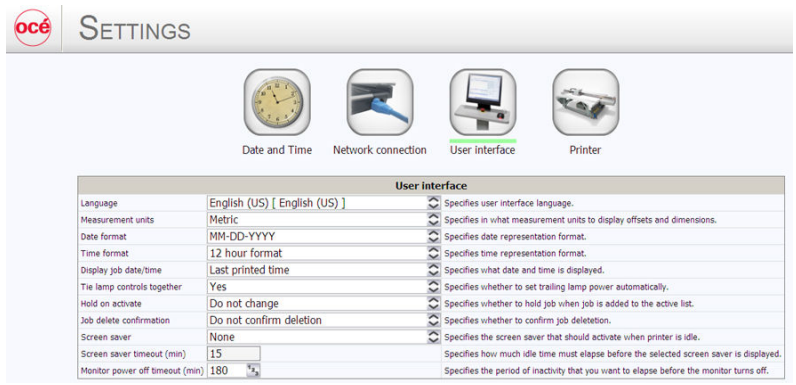
Network Connection Settings

Note:
Typically, DHCP is used to automatically obtain network settings. If "Use DHCP" is selected, the only thing you might want to change is the network name of the printer. The settings are displayed to troubleshoot possible network connection problems. One situation that would require changes is if your network does not use DHCP to automatically obtain network settings. In this case network settings have to be entered manually. If you don't know how to do this, bring in a network consultant to determine what the setting must be for the network (alternately, you can purchase a DHCP router for your network that will automatically supply the network settings).

- Network Name
- Printer Description
- Network Adapter Name
- MAC Address
- Network Status
- Use DHCP
- IP Address
- Subnet Mask
- Default Gateway

Note:
A network name for the printer cannot consist of numeric characters only - it must be a mix of alpha-numeric characters.
If the Printer name is changed, the printer must be restarted for the change to take effect. If any settings require a printer restart, a reminder will be displayed when that settings is selected.

User Interface Settings


SETTINGS
Date and Time
Network connection
User interface
Printer
User interface
Language
English (US) [English (US)]
Specifies user interface language.
Measurement units
Metric
Specifies in what measurement units to display offsets and dimensions.
Date format
MM-DD-YYYY
Specifies date representation format.
Time format
12 hour format
Specifies time representation format.
Display job date/time
Last printed time
Specifies what date and time is displayed.
Tie lamp controls together
Yes
Specifies whether to set trailing lamp power automatically.
Hold on activate
Do not change
Specifies whether to hold job when job is added to the active list.
Job delete confirmation
Do not confirm deletion
Specifies whether to confirm job deletetion.
Screen saver
None
Specifies the screen saver that should activate when printer is idle.
Screen saver timeout (min)
15
Specifies how much idle time must elapse before the selected screen saver is displayed.
Monitor power off timeout (min)
180
Specifies the period of inactivity that you want to elapse before the monitor turns off.

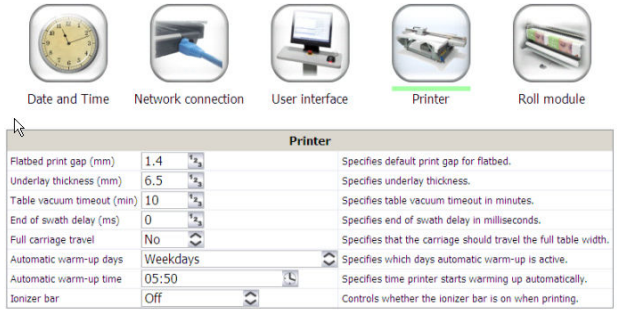
[51] User Interface Settings

Settings Available

The user interface allows you to change the following features:

- Language
- Measurement Units
- Date format
- Time format
- Display job/time
- Tie lamp controls together
- Hold on active
- Job delete confirmation
- Screen saver
- Screen saver timeout
- Monitor power off timeout

Printer Settings

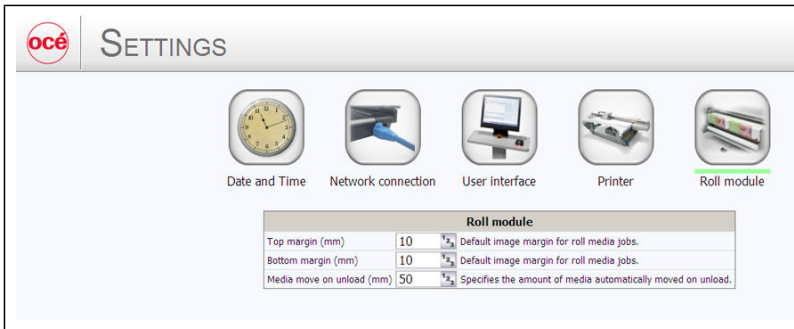

Date and Time
Network connection
User interface
Printer
Roll module
Printer
Flatbed print gap (mm) 1.4 Specifies default print gap for flatbed.
Underlay thickness (mm) 6.5 Specifies underlay thickness.
Table vacuum timeout (min) 10 Specifies table vacuum timeout in minutes.
End of swath delay (ms) 0 Specifies end of swath delay in milliseconds.
Full carriage travel No Specifies that the carriage should travel the full table width.
Automatic warm-up days Weekdays Specifies which days automatic warm-up is active.
Automatic warm-up time 05:50 Specifies time printer starts warming up automatically.
Ionizer bar Off Controls whether the ionizer bar is on when printing.

[52] Printer Settings

Allows you to set the following:

- Flatbed print gap
- Underlay thickness
- Table vacuum timeout
- End of swath delay
- Full carriage travel
- Automatic warmup day
- Automatic warmup time
- Ionizer bar (static suppression - On or Off)

Roll Module


SETTINGS
Date and Time
Network connection
User interface
Printer
Roll module
Roll module
Top margin (mm) 10 Default image margin for roll media jobs.
Bottom margin (mm) 10 Default image margin for roll media jobs.
Media move on unload (mm) 50 Specifies the amount of media automatically moved on unload.

[53] Roll Media Settings

Top Margin
Specifies the distance left unprinted above the image.

Bottom Margin
Specifies the distance left unprinted below the image.

Media Move on Unload
Specifies the amount of media moved on unload in the selected measurement units.

Note:
This setting icon is displayed only if the Roll Media Option is installed.

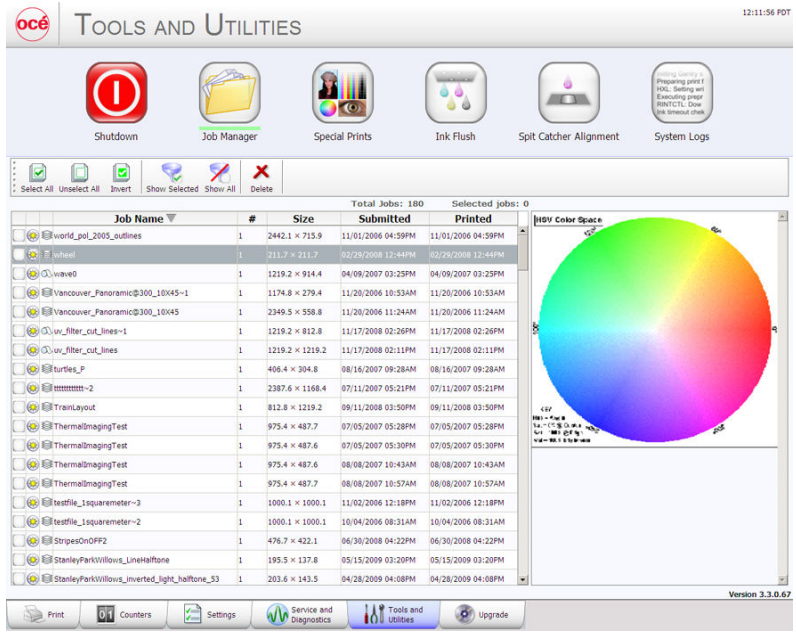
Tools and Utilities Module

Introduction

The Tools and Utilities Module has six sub-modules: Shutdown, Job Manager, Special Prints, Ink Flush, Spit Catcher Alignment, and the System Logs. When you click on the Tools and Utilities tab, Special Prints always appears first. Click on the other icons to access the sub-modules.

- **Shutdown** provides a clean way to properly power down the printer.
- **Job Manager** allows you to perform batch delete print jobs.
- **Special Prints** provides special prints for various purposes, such as reference, adjustment and alignment etc. Some are for operator use and others are for service technicians use only.
- **Ink Flush** clears the selected color ink line. This is used when you change to a different kind of Océ-approved ink and need to flush out all of the existing ink.
- **Spit Catcher Alignment** allows you to adjust the carriage position over the spit catcher after you install it.
- **System Logs** allows the operator to generate log files for service diagnostics and troubleshooting purposes.

Illustration



[54] Job Manager

Shutdown

Use the Shutdown icon when you need to turn the printer power off. The printer should be left powered On at all times but there are some exceptions such as some service procedures, or if the printer requires a reboot.

Job Manager

The Job Manager allows you to view a select range of print jobs or to delete many print jobs at the same time. In the Print Job module, you can only manipulate one print job at a time. In the Job Manager you can select multiple print jobs using the checkbox to the left of each job. Once you have your range selected you can then delete them. You can display print jobs by several criteria available from the Show Selected icon.

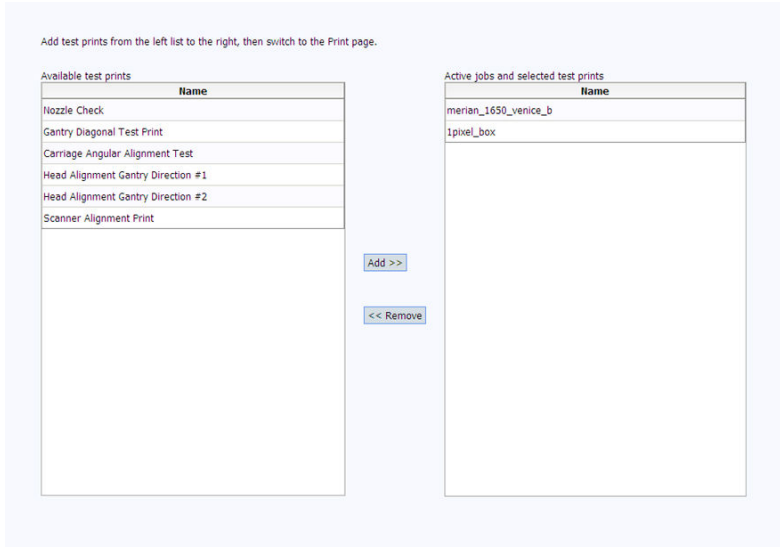
Special Prints

The Special Prints module displays two lists. The list on the left shows the available special prints. Some of these prints are used by service technicians to adjust and troubleshoot the printer. Some are of interest to the Operator: the Reference print, the table ruler prints, the Nozzle Check print, and the Media Advance Correction Factor print.

Special Prints of Interest to the Operator

- the **Reference print** is used to determine that the printer output meets quality standards. A reference print that is printed at the factory is shipped with each printer. It can be used as a comparison with one printed at the customer site.
- The **Table Rulers** are meant to be printed on the table to assist you to place media. These images are set up to print on the horizontal and vertical axes of the table. They are available in metric or imperial measure.
- The **Nozzle Check** is used to determine if there are any clogged nozzles that can affect print quality (note that it is also available on the command toolbar in the Print Job Control module).
- the **Media Advance Correction Factor** print (used for roll media only). This print is used to correct a certain type of banding related to incorrect media advance - see How to Determine Media Advance Correction.

The list on the right shows all active jobs that are currently in the print queue. Add a special print from the left into the right list to make it active in the Print Job Control module. If you remove a job from this list, it is also removed from the Active job list and is not available to print. Special print instances that are removed from the Active list do not go to the Inactive list; they are deleted.



[55] Special Prints

How to Load a Special Print

1) Click a special print to select it in the left window.
2) Click the Add button to place it in the print queue on the right.
That special print is now available in the Active job list of the Print Job Control module.

How to Print a Special Print

Go to the Print Job Control module to actually print the special print. It will appear in the active job list and is printed like any other print job.

Note:
Refer to the sections that document the special prints for details on printing. For example, the Nozzle check and the Reference print are printed on I/O paper, while the Ruler Guide Print is printed directly on the table. Note that some of the special prints are meant for service technicians only and are not for use by the printer operator.

The Ink Flush Procedure

The Ink Flush Procedure is used when the printer is switched from one type of ink to another that is not compatible with the first ink. It requires a special ink flush kit and

will not work without it. If you attach a new bag of ink that is not compatible, or for any other reason an ink flush is required, you will see the Ink Status screen with a mesaage that directs you to the Ink Flush Procedure.

Note:
Contact your local service representative for information about the ink flush kit that is required for the flush procedure. Only inks certified by Océ can be used with your printer.

Spit Catcher Alignment Procedure

A Spit Catcher is necessary for all printers with the white ink option installed or for any printer that uses the new Océ ICJ256 inks. The Spit Catcher consists of a slotted cover for the Maintenance Station drawer and a foam pad that is held in place under the drawer. Both the white ink and all of the IJC256 inks need to "spit" periodically to help keep the printhead nozzles clear of debris. The Alignment Procedure is needed when the Spit Catcher is first installed or if for some reason the park position of the carriage changes. The purpose of the alignment is to have the carriage parked directly over the slots in the spit catcher so that the ink that is spit falls though the slots and is soaked up by the foam pad below. If you see a buildup of ink on the surface of the spit catcher it may mean you need to follow the alignment procedure.

Note:
The foam pad must be changed if it becomes too saturated with ink. It is a commercial item so see your local representative for replacements.

System Logs

The System Logs are raw data log files for service diagnostics and troubleshooting purposes. They are meant for service technicians only. Generate system logs only when requested by an Océ service technician and follow the instructions they provide for retrieval of the files.

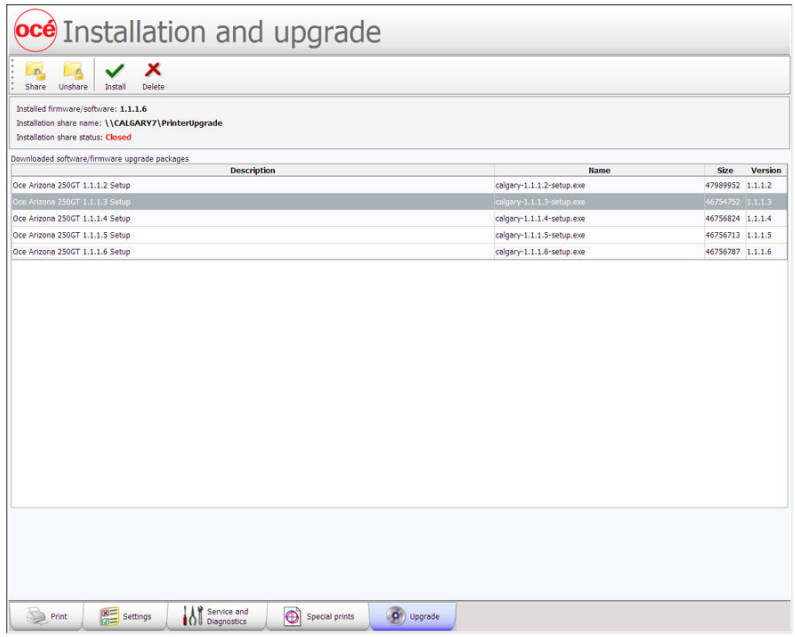
Note:
When System Logs are generated, any previously saved log files are deleted. Therefore, do not generate a second batch if you have just recently generated log files (unless requested to do so by a service technician).

Installation and Upgrade Module

Introduction

As we are committed to improve and refine the quality and functionality of the Océ Arizona 550 GT printer, there will be periodic upgrades to the underlying firmware and printer software. Software updates are available only to customers with a service contract. Your local service representative will either install the upgrade or provide you with the upgrade file in some circumstances.

Illustration



[56] Printer Upgrade Module

How to Upgrade the Firmware and Software

Your dealer or service representative will advise you when an upgrade of the printer software is necessary. If they request that you install the upgrade, instructions will be provided with the upgrade file.

Chapter 5
How to Operate Your Arizona Printer

Training Requirements

Introduction

The operator must receive training for safety, printer operation, and ProductionHouse® software prior to operating the Océ Arizona 550 GT printer.

Safety Training

Before operating the Océ Arizona 550 GT printer, make sure you have read and understood all of Chapter 3 "Safety Guidelines".

Océ Operator Training

For optimal safety and print quality, all Océ Arizona 550 GT printer operators must have received training by qualified Océ service personnel. Océ training provides a general orientation to printer safety and operating procedures. This User Manual is not a substitute for official training.

Onyx ProductionHouse Training

Maximum performance from the Océ Arizona 550 GT printer requires a properly trained operator. Océ trains the operator in the use of the printer hardware and software at installation. However, this is not a substitute for formal ProductionHouse® training.
Operators of the Océ Arizona 550 GT should be fully versed in the operation of Onyx ProductionHouse® . For any operator unfamiliar with its operation, Onyx ProductionHouse® training is required. Training courses are available; contact your local representative for an Onyx-certified training program.

Note:
PosterShop is not capable of producing profiles for color management with the Océ Arizona 550 GT and also does not have the layout editor capabilities of ProductionHouse. Also, if you use PosterShop the Océ Arizona 550 GT printer driver must be purchased (it is included at no cost with ProductionHouse). Therefore we recommend that customers not use PosterShop with this printer.

How to Power the Printer On and Off

Introduction

This section describes how to switch the printer On and Off. When the printer is switched On, the interface software is displayed on the LCD monitor that is located on the Operator Control Station. From there the operator can access and control the printer. We recommend that you leave the printer powered on at all times. However, if the printer is switched Off for extended periods, there are procedures to follow that are documented here.

Before you begin

Before you apply AC power to the printer, make sure that loose objects such as clothing, tools and cleaning materials are not interfering with the printer mechanisms. Position the power cord so that it does not pose a hazard when walking around or moving media or other objects near the printer. The printer has an AC power switch that turns the printer On or Off. The switch also functions as an AC power lock-out switch. It is located at the end of the printer, as seen below.

Note:
Some printer models may have a different type of AC power plug than what is shown in the photo. See the Site Preparation guide for a photo of the two types of power plugs.

Caution:
THE SOCKET OUTLET MUST BE INSTALLED NEAR THE EQUIPMENT AND BE EASILY ACCESSIBLE. Ensure that you follow the guidelines in the Site Preparation Guide before plugging the printer AC power plug into the socket.

Attention:
Unplug the AC power cord from the printer to completely isolate the electronics of the printer, especially when you move or service the printer.

How to Power ON

1. Ensure that the AC power plug is properly seated.
2. Turn on the AC power On/Off switch.
3. If it is not already on, turn on the power of the Control Station LCD monitor.

4. During the boot-up procedure, the printer software is automatically started. The software displays a splash screen followed by a screen that requests you to raise and then lower the carriage guard.
5. Lift the carriage guard slightly and then replace it. At the control station click on Continue to finish the startup procedure.

[57] AC Power Switch

6. The splash screen will show initialization messages and then the Print Job Control module screen appears. The initialization is complete when the top left panel of the display shows "Ready". Your printer is now ready for use.

Attention:

After powering the printer On, leave it running continuously, even when at idle. Failure to leave the printer powered on may result in ink draining out of the ink reservoirs. It may also result in damage to the printheads. Leave the printer powered On at all times, unless service to electrical components is required.

Note:

The printer is designed to be left powered ON at all times as only minimal power is consumed when the printer is idle.

How to Power Off

Attention:
To maintain optimal printer reliability, leave the power on at all times. However, there are exceptions such as for ink flushes, some service procedures, or if the printer requires a reboot.

If you need to shut down the printer for just a few minutes, follow this procedure. However, if you need to leave the printer idle for periods of 30 minutes to 14 days, see the table below.

1. Turn off the UV lamps.
2. Wait for the lamps to cool down (fans will stop).
3. Click on the Shutdown icon in the Tools and Utilities tab to exit the printer software.
4. Turn the AC power switch to the OFF position.
5. Turn the power back on when the service or procedure is complete.

Note:
Avoid Extended Power Off
If the power is switched off for only a short period (for example, when the printer is shut down and then immediately restarted to correct an electrical problem or other troubleshooting), no special action is required at startup. However, if it is necessary to leave the printer idle for an extended period refer to the table below. Also, perform Printhead Maintenance and Swab the printheads when you start to use it again. We recommend that you leave the printer powered On at all times except for maintenance or repair.

How to Prepare the Printer for Idle Periods:

Attention:
Do not turn off the printer during these idle times.

15 to 30 minutes	■ Turn off lamps
30 minutes to 24 hours	■ Turn off lamps ■ Turn off ink heater

24 to 72 hours	■ Turn off lamps ■ Perform printhead maintenance when the ink temperature is at least 40° Centigrade (104° Fahrenheit) ■ Swab print heads ■ Turn off ink heater ■ If the Automatic printer warm-up was set in Printer Settings, turn it off
3 to 14 days	■ Turn off lamps ■ Perform printhead maintenance when the ink temperature is at least 40° Centigrade (104° Fahrenheit) ■ Swab printheads ■ Turn off ink heater ■ Wait until ink cools to below 30°C, then close off all purge valves on the carriage ■ If the Automatic printer warm-up was set in Printer Settings, turn it off ■ Remove or rewind any media from the RMO
Longer than 14 days	■ Contact your local service representative if you need to prepare the printer for longer term storage

How to Lock Out the Power Switch

Attention:
Some service procedures require locking out the On/Off switch to ensure operator safety. When the switch is locked out, it is impossible to supply power to the printer.

1. Refer to the Shutdown procedure "How to Power Off", at the beginning of this section.
2. Turn the AC power switch to the Off position.
3. Apply a lock and a tag-out label to the Lock-out area of the switch for the duration of any service or maintenance procedures.
4. Perform service procedure (generally this is done by a service technician)
5. When maintenance or service is complete, remove the lock and tag-out label and turn the AC power switch to the On position.

Illustration

[58] AC Power Switch and Lockout

How to Use the Disconnect Device

Attention:
The AC power plug is the main disconnect device for the printer. For maximum safety, if the printer is moved, the AC power plug must first be unplugged from the printer.

1. Follow the Lock-out procedure above.
2. For additional safety, also disconnect the AC power plug from the wall outlet.
3. When the printer is successfully moved or the repair work is complete, re-connect the power plug and unlock the AC power switch.

How to Install the Onyx Printer Driver

Introduction

This section explains how to install and configure the Onyx ProductionHouse Océ Arizona 550 GT printer installation file.

Purpose

The printer installation file configures the Onyx software so that it knows how to communicate with the Océ Arizona 550 GT. This prepares the printer so that the operator can manage print jobs.

Before you begin

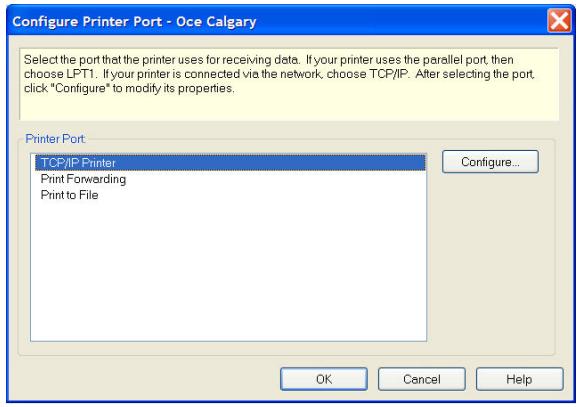
Make sure that the Onyx ProductionHouse application software is installed before you install the printer driver.

Note:
The Onyx Printer Installation Driver File can be installed as the final step in the installation of the Onyx ProductionHouse software application or it can be downloaded separately and installed later. However, it must be available for the software to communicate with the printer.

Installation Procedure

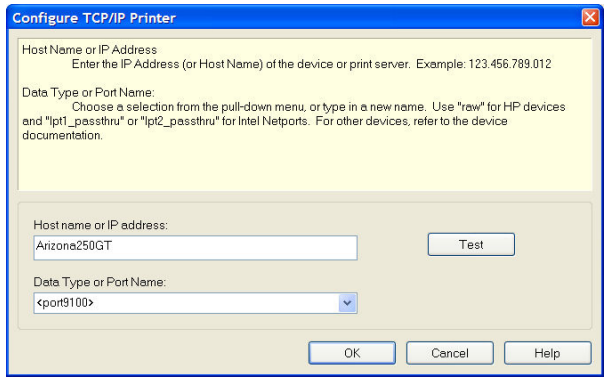
1. Power on the printer.
2. Select the Setup tab in the printer software to access the printer's network name.
3. Verify that there is an Ethernet network connection between the ProductionHouse computer and the printer. To do this click on the Windows Start button the select My Computer, My Network Places and ensure that the network name for the Océ Arizona 550 GT is on the list.
4. Install the Océ Arizona 550 GT Printer Installation File on the ProductionHouse computer (if you have not already done this during the installation of the ProductionHouse software). To install, click Start, All Programs, then ProductionHouse and select Add Printer.
5. Select the media to be installed and continue with the installation.

6. After the printer driver is installed the Configure Printer Port window will launch automatically. Select **TCP/IP Printer** then click on **Configure**.


Configure Printer Port - Oce Calgary
Select the port that the printer uses for receiving data. If your printer uses the parallel port, then choose LPT1. If your printer is connected via the network, choose TCP/IP. After selecting the port, click "Configure" to modify its properties.
Printer Port:
TCP/IP Printer
Print Forwarding
Print to File
Configure...
OK
Cancel
Help

[59] Configure Printer Port

7. Enter the Network name of the printer (as displayed in Step 3) and make sure <Port 9100> is selected for the port.


Configure TCP/IP Printer
Host Name or IP Address
Enter the IP Address (or Host Name) of the device or print server. Example: 123.456.789.012
Data Type or Port Name:
Choose a selection from the pull-down menu, or type in a new name. Use "raw" for HP devices and "lpt1_passthru" or "lpt2_passthru" for Intel Netports. For other devices, refer to the device documentation.
Host name or IP address:
Arizona250GT
Test
Data Type or Port Name:
<port9100>
OK
Cancel
Help

[60] Configure Printer Host Name

Note:
If you have more than one Océ Arizona 550 GT printer, each printer must have a unique network name. The network name can be changed in the Settings module of the printer User Interface.

Check Configuration

1. Click on Test to verify that the computer and printer are in communication.
If the Test was successful, a verification message is displayed to indicate a Valid IP address was found.

Correction

1. If no valid IP address is found, check that the network name of the printer is correct and that port 9100 was selected.
2. Run the Test again.

Result

When a Valid IP address for the printer is verified, click on OK to complete the configuration of the communication link between ProductionHouse and the Océ Arizona 550 GT printer.

How to Manage Print Jobs

Daily Start-up and Shut-down

Introduction

Keep your printer clean and perform all recommended scheduled maintenance to ensure that the printer is ready to produce optimal quality images.

When to do

The start-up procedure must be performed every morning or after a period of time when the printer has not been used. The shut-down procedure indicated here is for the end of a regular workday. If the printer is shut down for longer periods of time than a few days, then there are more considerations, as documented in the previous section on How to Switch the Printer Off (see the note on Extended Power Off).

Start-up Procedure

1. Turn on the ink heater (click on the Ink Temperature Control icon located on the Command Toolbar of the Job Control screen).
2. Clean the carriage underside.
3. Perform Printhead Maintenance after the ink temperature has reached at least 40° C (104° F).

Note:
Refer to the Maintenance chapter for details on how to perform these procedures.

Shut-down Procedure

1. Turn off the UV lamps (click on the lamp icon located on the Command Toolbar of the Job Control screen).
2. Turn off the table vacuum.
3. If it is the end of the work week, swab the printheads.
4. Turn off the ink heater (click on the Ink Temperature Control icon located on the Command Toolbar of the Job Control screen).
5. Do not power off the printer (unless the printer will not used for more than 14 days - in that case call your service representative).

How to Set Up a Print Job

Introduction

This section explains how to select an image to print on the Océ Arizona 550 GT. The basic steps are outlined here and explained below. More detailed explanations for some of these steps are available in Chapter 4 How to Navigate the User Interface.

- Prepare A Digital Image Using Onyx ProductionHouse
- Print The Job From Onyx ProductionHouse To The Océ Arizona 550 GT Printer
- Perform Printhead Maintenance (If First Print Of The Day)
- Select Job To Be Printed and Check Print Parameters
- Measure Media Thickness
- Select Print Icon, select Print Mode, and Confirm Media Thickness
- Prepare Media for Printing
  Place And Register Media On The Printer Vacuum Table
  Select Active Print Zones
  Mask Active Vacuum Zones Not Covered With Media
  Turn On Table Vacuum
  Adjust Bleed Valve, If Required
  Clean Media, If Required
- Check the table to make sure that there are no obstacles that can interfere with the travel of the gantry or carriage
  Start the Print

Prepare a Digital Image with ProductionHouse

Operator must be trained to use ProductionHouse, (documentation and training provided by Onyx).

Print The Job From Onyx ProductionHouse

When the job is sent from ProductionHouse, the job transmission progress is indicated in the lower right corner of the User Interface display. After the transmission has completed it will appear in the list of Active print jobs in the Job Control Module.

Perform Printhead Maintenance (if this is the first print of the day)

Refer to the Maintenance section in this manual for details. This must be done at the beginning of the work day or when image quality problems, such as banding, appears.

Measure Media Thickness

Use a digital slide caliper or micrometer to accurately measure the media thickness of the media. An error in measurement of media thickness will affect bi-directional alignment and can contribute to the amount of graininess in the printed image or cause a carriage/printhead crash with the media.

Set the Printer to Flatbed

Select the Flatbed button on the toolbar to prepare the printer. This is required only when the printer is initially started, or if it is reset due to an error condition.

Select Job To Be Printed, Check Print Parameters And Verify Media Thickness

Click on the job to be printed from the active job list to select it. After it is selected the parameters on the job information and parameters panel will be displayed and may be modified if desired. Refer to the section Graphical User Interface Display for details on what is displayed and how to modify the job information.

Select Print Icon, Print Mode, and Confirm Media Thickness

When you select the Print toolbar icon it will gray-out the icon and the hand icon to the left of the job to be printed will turn green.
When printing Flatbed mode and Flatbed icon on the command toolbar is not selected, select it. Similarly, if printing in roll mode and the Roll icon is not selected select it.
The print job's icon should change to red/orange, and also the Pause icon and Confirm thickness buttons should appear in the command toolbar right beside Media thickness field.
Enter the measured media thickness value in indicated measurement units.
Select the 'Confirm thickness' button.

Prepare Media for Printing

Place And Register Media On The Printer Vacuum Table

Place the media on the table in the orientation that matches the job to printed and register the media to the print origin. In the next section there are more details on how to perform the following actions.

Select Active Vacuum Zones

Select the required vacuum zones to hold the media to the table using the table vacuum. The three vacuum zone control handles control which of the three zones on the printer table will have vacuum applied when the table vacuum pump is turned on. The vacuum

zones are opened or closed using a quarter turn handle. Refer to the next section for details on the dimensions and placement of the vacuum zones.

Mask Active Vacuum Zones Not Covered With Media

To hold the media to the table it is important to completely cover active vacuum zones with either the media to be printed on, or a masking material. The masking material should not be thicker than the media to be printed on. If a full bleed image is to be printed, the masking material should be the same thickness as the media to be printed on to prevent overspray from accumulating on the print head nozzle plates.

Turn On Table Vacuum

Click on the Vacuum button in the top right corner of the UI display to activate the table vacuum. Also a vacuum foot pedal switch is provided to help secure the media on the table vacuum. Step on the foot pedal to toggle the table vacuum on or off.

Note:
When the vacuum is switched off, wait a few seconds before you switch it on again.

Adjust Vacuum Bleed Valve, If Required

A bleed valve can be adjusted to reduce or increase the amount of vacuum suction on the media. Less suction reduces artifacts caused by the suction when imaging on flexible media. In most cases when printing on rigid material, full vacuum suction is desired.

Clean Media, If Required

If the media is dusty or dirty, clean it with an appropriate cleaner. If using a liquid like isopropyl alcohol, allow sufficient time to dry prior to imaging.

Start Print

The Print button is located at the corner of the table where media is loaded. Press the Print button to start the print job. If the job was selected, the media thickness confirmed and the vacuum is turned on, printing will start after the ink and lamps reach operating temperature.

Note:
When the ink is at a low room temperature it may take up to 20 minutes for it to warm up to operating temperature. The printer will not print until the ink warms up. Also, when the printer is idle it will maintain the ink at operating temperature for two hours.
Note: The image is printed towards the print origin instead of away from it (i.e., the last data line to be printed is the line at the print origin). The reason the image is printed in this direction is to allow the gantry to lead the image in the print direction so it does not block the image when it starts printing. Also it reduces the time it takes for the gantry to start the print.

How to Manage the Media Vacuum

The Media Vacuum System

Introduction

The Océ Arizona 550 GT uses a low-flow, high-vacuum system to secure rigid media for printing on the printer table. A fabricated aluminum overlay sheet placed on the surface of the table creates the vacuum field. The overlay sheet is pin-registered to the table. A rotary vane vacuum pump is used to evacuate the chamber of air between the sheet and the table. Three air-feed ports connect the chamber to the vacuum pump through a series of manually operated flow valves. These valves are used to activate or shut down the different vacuum zones. In order for the system to work effectively during printing all the circular pockets on the top surface of the overlay sheet connected to an active vacuum chamber must be covered. This creates a closed vacuum system. A bleed valve is provided to adjust the level of vacuum, if so desired.

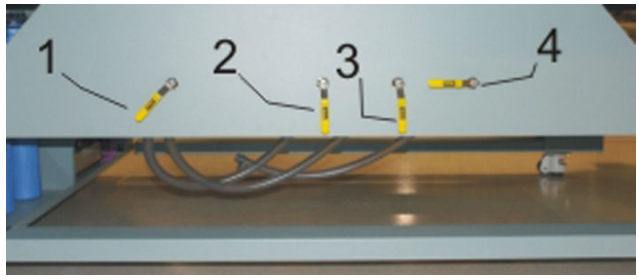
Vacuum Overlay Sheet

The vacuum overlay sheet produces a small gap between the sheet and the top of the table for air to flow. Foam tape applied around the perimeter of the bottom of the sheet provides an edge seal. Additional foam tape can be used within the perimeter to create up to three custom vacuum zones.

Default Vacuum Zones

The printer is shipped from the factory configured with one large vacuum zone that accomodates the maximum media size. There are two suggested custom vacuum zone configurations, one for Metric and one for Imperial units. These zones can be set up for common media sizes, and can be modified with additional foam tape. The next section has more information on how to create custom zones.

Illustration



[61]

[62] Vacuum Bleed Valve and Zone Controls

1 - Bleed Valve partly open	2 - Left Zone is Open
3 - Top Zone is Open	4 - Right Zone is Closed

Vacuum Zone Control Handles

These controls are meant for use with custom vacuum zones. If you only use the factory default of one large zone, make sure all three handles are left in the open position. When you create custom zones the three control valves are used to control which zones of the printer table will have vacuum applied when the table vacuum pump is turned on. To close a zone turn the control handle a quarter turn clockwise.

Vacuum Table Foot Pedal

The vacuum foot pedal toggles the table vacuum on or off. It helps the operator to secure the media on the vacuum table since it allows hands-free operation. The vacuum must be turned on prior to starting a print, and the vacuum cannot be turned off until a print is completed.

Vacuum Bleed Valve & Gauge

The bleed valve handle is located to the left of the three vacuum control handles. This bleed valve can be adjusted to control the amount of vacuum suction on the media. Less suction reduces artifacts caused by the suction when imaging on flexible media. If you

see dimples on the media that are the same size and location as the vacuum table punched holes, introduce bleed until the dimples disappear from the media.
The bleed valve is off when its handle is in the horizontal position. To activate the bleed valve, turn the handle to the vertical position. The closer the handle is to the vertical position, the more vacuum pressure is reduced.
The vacuum guage is located on the side of the table above and to the left of the bleed valve handles. It provides a visual representation of the actual pressure in the vacuum table system.

Note:
Use the vacuum gauge to determine if a zone is properly masked. When the active zone is properly masked the gauge will read at 20"Hg (68 kPa) or higher. Small leaks can reduce this number and therefore the efficiency of the vacuum. Porous media can also degrade the vacuum effect.
If the vacuum gauge for an active zone reads below 10"Hg (34 kPa) and you have ensured that the area is properly masked and taped off, you may have a leak in the vacuum system. Place a service call only if you determine that the zone is correctly masked and the gauge reads consistently low.

How to Maintain the Vacuum Overlay Sheet

If an overlay sheet is damaged, replace it. The overlay is an optional commercial item and can be ordered from your local sales representative. You may want to purchase multiple overlays if you need multiple common material sizes or a regular, repeating job that is non-square or unusually sized.
If ink build-up occurs on the overlay sheet, remove the ink. If it is not removed, the print gap could be affected and this may affect the vacuum table's ability to secure the media properly. To remove ink we recommend that you use a paint scraper containing a straight edge razor blade (these can be found at a local hardware store). Refer to the Maintenance section for more detailed instructions.

How to Create Custom Vacuum Zones

Introduction

A fabricated aluminum overlay sheet placed on the surface of the printer table is used to create a vacuum field that is divided into zones. When the printer is installed, a single zone equal to the maximum media size is available. Vacuum zones can be configured in the field to meet specific customer requirements for media sizes. This section describes the procedure to re-configure the vacuum overlay sheet to use custom zones. These recommended zones shown below are either in Metric or Imperial dimensions according to operator preference.

The vacuum control handles are used with the custom vacuum zones. When you create custom zones the three control valves control what zones will have vacuum applied when the table vacuum pump is turned on. The left handle controls the Left zone, the middle controls the Top zone and the right controls the Right zone. The vacuum zones are open when the handles are vertical. To close a zone, turn the control handle a quarter turn clockwise.

Note:
The Océ Arizona 550 XT does not have vacuum relief valves to adjust the intensity of the vacuum, so it is either On or Off. Because of this lack of relief valves, it is not possible to create custom zones as you can with the other models. However, the table has three pre-set vacuum zones that are described in Chapter 6.

Purpose

The vacuum system holds the media in place. The three suggested custom zones described in this section and illustrated below, are arranged to accommodate common media dimensions. If you create custom zones, they can be turned off or on according to where media is placed. If you have additional aluminum overlays you can quickly change the configuration of the vacuum zones by placing another overlay on the table.

When to do

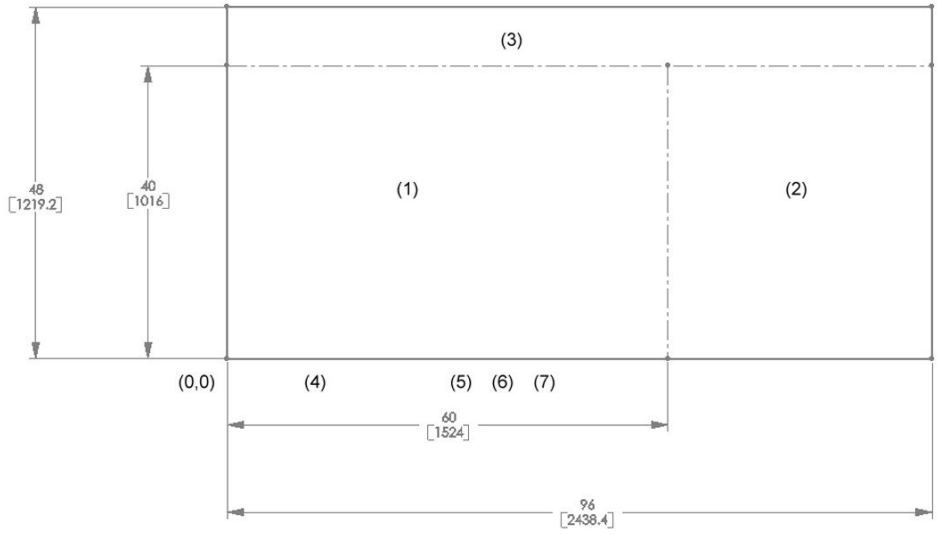
If the suggested custom zones on your printer do not match with media sizes that you use frequently, it is possible to change the layout of the zones to suit your particular purpose. This helps to minimize the use of tape and placement of media that will not be printed on when the media size does not match exactly with the zone size.

Required tool

- Foam tape (part # 3010106701) - use only to create custom zones. Do not use it on the perimeter of the printer table: for the perimeter, use part # 3010106699. Note that these tapes are not available for direct sales to customers. Please see your local service representative to purchase tape.

Note:
Make sure you clean the area with isopropyl alcohol before you apply foam tape to create a new zone.

Illustration



[63] Imperial Vacuum Zones

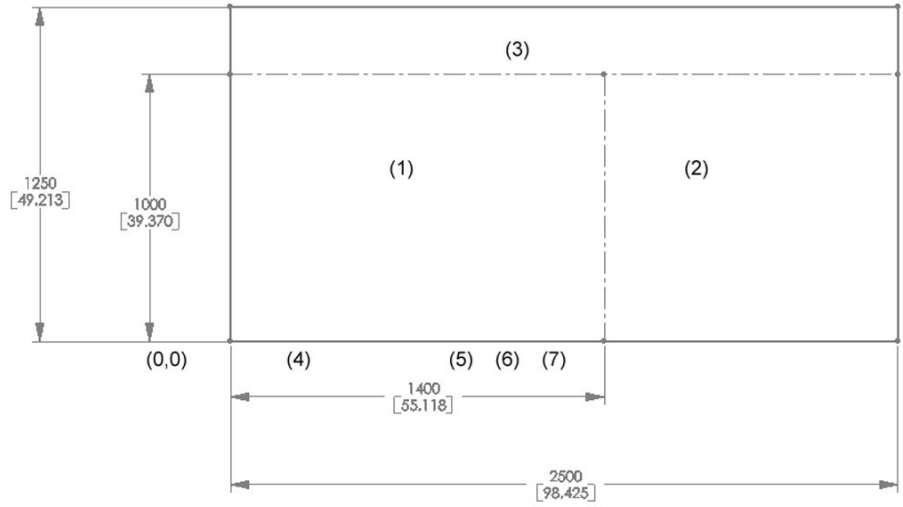
[64]

Legend for Zone Illustrations

(0,0) Print Origin	(1) Left Vacuum Zone	(2) Right Vacuum Zone	(3) Top Vacuum Zone

Legend for Zone Illustrations

(4) Vacuum Bleed Valve	(5) Left Zone Control	(6) Top Zone Control	(7) Right Zone Control



[65] Metric Vacuum Zones

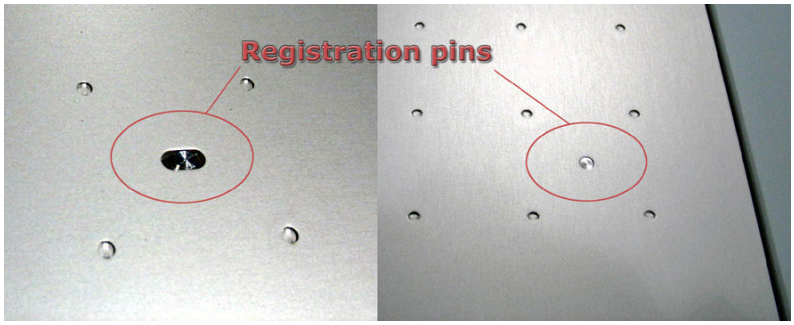
How to Set Up Custom Zones

Attention:
When you remove the aluminum overlay to create custom zones, be careful that you don't bend or warp it. Always have a second person to assist you when you handle the overlay. Wear clean gloves to avoid the deposit of oil and dirt on the overlay surface.

The aluminum overlay sheet lays on the printer table surface and is positioned using two registration pins that are bonded to the table. The circular hole and the oval slot in the overlay sheet fit over the registration pins and hold the overlay from moving on the table surface. This section explains how to handle the overlay when you remove it from the table to create custom vacuum zones.

Attention:
Be careful that you don't hit the registration pins when you remove or replace the overlay. If these pins are dislodged, there is a replacement kit available or you can re-glue them with epoxy.

1. With the gantry in its home position, carefully lift the overlay up enough to release it from the two registration pins (the pins are located on the Control side of the table near the corners of the overlay: the side with the Print button and vacuum gauge).



[66] Registration Pins

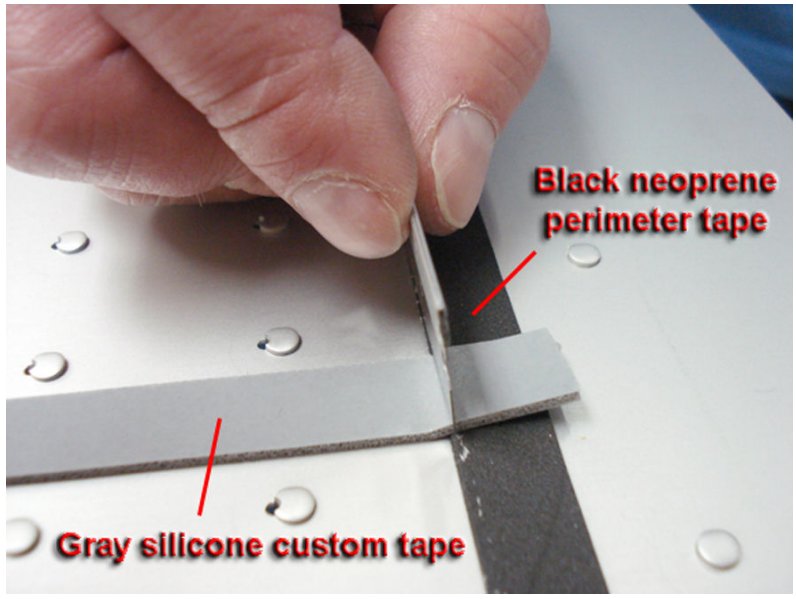
2. With one person at each end, carefully raise the overlay to the upright position on the Control side edge of the table.

[67] How to Handle the Overlay

Note:
Make sure that you support the middle parts of the overlay so that you don't bend or warp it, as shown in the photo. If it does warp you may have to turn it over and leave it to settle for a while until it is completely flat.

3. With one hand on the top and the other on the bottom, carefully flip the overlay over and lay it down flat on the table (or another clean, flat surface).

4. Remove any old foam tape that is no longer required in the new configuration.
5. Clean the area of the overlay sheet where the new foam tape is to be applied with isopropyl alcohol.
6. Measure and add tape (part # 3010106701: gray silicone foam tape) in the desired locations to create zones. When you create a zone we recommend that active vacuum holes are a minimum of 15 mm from the outside edges of the media. This optimizes the sealing effect between the media and the table.



[68] Join the tape with no gaps

Note:
Make sure there are no gaps at any of the places where tapes join at a right angle. Also make sure the gray custom tape does not overlap the black perimeter tape.

7. Carefully lift the overlay back to its original position and rest the edge on the Control side of the table in the vertical orientation.

Note:
Ensure that the alignment holes in the overlay are on the same side as the two alignment pins on the flatbed.

8. Lower the upper end of the overlay slowly as you slide your hand inward to support the center to avoid bending until it is completely level with the flatbed.
9. Line up the two holes in the overlay with the two registration pins and square the overlay to the flatbed.

10. Completely cover all zones, close the bleed valve, turn on the vacuum and verify the closed system vacuum level is > 20 inches of Hg. Also verify that the time it takes for the vacuum to establish is less than 4 seconds.

How to Manage Media

How to Handle Media

Introduction

Océ Display Graphics Systems has conducted extensive testing of many media. Since the Océ Arizona 550 GT printer is capable of imaging on a wide range of material, we encourage you to explore various media so that you can establish your own criteria for achieving high quality images in your work environment.

Use ICC profiles to control ink density and to help achieve consistent color. If an ICC profile is not available for a particular media and it is not possible or convenient to create one specifically for that media, select an ICC profile for another media that is similar in composition and color and the results will very likely be acceptable. Profiles are much less media-dependant for UV ink printers like the Océ Arizona 550 GT than for solvent-based printers. For access to Onyx ProductionHouse profiles, please consult our web site at: www.dgs.oce.com/

Definition

The term media covers a wide range of possible materials for the Océ Arizona 550 GT printer. Essentially, any material that is less than 45mm (1.9 inches) thick, and less than the maximum size of 1.25m wide x 2.5m long (49.2 in x 98.4 in), can be considered viable media. Some materials will hold the ink better than others, so we encourage you to experiment with media to determine what works best for your purpose.

Attention:
When printing on reflective media, we advise that you monitor the nozzle check and printhead nozzle plates. Perform additional printhead maintenance, if required, to prevent ink from partially curing/gelling on the printhead nozzle plates.

How to Handle, Store, and Clean Media

See material-specific documentation for recommended handling and storage requirements. General material storage and handling suggestions follow:

- Store media in a dry environment avoiding high temperature, high humidity, or direct sunlight. The size of the material can change according to the temperature and/or

humidity changes of the working environment. Ideally, store media in the same environmental conditions as it will be used.

- Store media flat to reduce tendency to bow. Do not use creased, damaged, torn, curled, or warped material.
- Do not leave material loaded in the printer for an extended period of time. The material may curl resulting in misalignment, jams, or decreased printing quality.
- Some material has a printable side and a non-printable side. If you print on a non-printable side, adhesion and color may be affected.
- Handle media with lint-free gloves. Oil deposits from fingers will degrade print quality. Do not touch the printable side of material.
- Media must be free of lint, dust, oil or other debris. Use techniques and solutions that are appropriate to the manufacturer's recommendations.
- Use a tack cloth to clean media as it will reduce static buildup. Press lightly when you use a tack cloth to prevent residue deposit on the media.

Note:
Dirty media can affect image quality and reliability of printer output. If you wipe the media with a tack cloth before printing, it will reduce ink buildup on the carriage underside. The tack cloth removes static and also removes particles that tend to attract stray ink drops that result in ink buildup. Tack cloths are used by auto-body shops to clean cars before painting. Océ does not provide additional tack cloths beyond what is in the Accessory kit. If you did not receive a cloth or if you wish to purchase additional tack cloths, they are available at local hardware or auto-oriented stores.

Carriage Collision Recovery

If something on the table is higher than the media (or if the media is thicker than what is actually set in the print job settings), a carriage collision may occur. If a collision occurs, the carriage will stop and display a message on the User Interface panel. After the operator clears the offending media from the table and before the next print is started, printhead maintenance must be performed (See Printer Maintenance section).

How to Handle Media with Uncured Ink

If the UV ink is not properly cured, wear nitrile gloves when you handle prints. To help ensure that the ink cures fully, set the UV lamp power as high as possible for the particular media you are using. This will minimize the risk of skin irritation and sensitization from possible exposure to uncured ink.

Media Adhesion

Some media have better adhesion quality than others. Factors such as the amount of ink used and the amount of curing energy from the UV lamps can affect adhesion.
For more information on media adhesion, see Application Bulletin 6 on the customer support web site.

Media-Related Application Bulletins

For additional information on various aspects of handling and managing media refer to the Customer Support web site. See Appendix A of this document for a list of available bulletins or visit the web site to download bulletins:
www.dgs.oce.com/

Thermal Expansion of Media

When imaging on media that will expand when subjected to heat (e.g., styrene or Plexiglas, etc.), don't wedge the media by butting other material against it as this may cause the media to buckle. Also if multiple pieces of the media are used, allow enough space between the pieces to allow for thermal expansion. Placing tape on the table prior to laying down the media will prevent ink from being imaged onto the table. Finally, if you overprint on media that expands when heat is applied, we recommend that you group the desired image with a preceding image so the printer is a consistent temperature when starting to print the desired image.

Thermal Deformation of Media

Some heat-sensitive media may deform when subjected to high heat. If this occurs you can reduce the lamp power from the default setting of 7 to find a compromise level that allows the ink to cure but does not warp the media. You can also try to print uni-directional using only the trailing lamp (to do this set the power of the leading lamp to 0).

Media Registration

Media can be registered on the table using the **table rulers**. These rulers are printed on the table and provide a horizontal and vertical rule that originate from the 0,0 print origin point on the table. The rulers can also help to provide offset distances if you need to start a print away from the origin point.

Alternately, the **media registration cards** can be used to register media if it must be placed consistently away from the table rulers. These PVC adhesive-backed card can be placed anywhere on the table to set new coordinates for print origin to enable consistent registration of media in that location. Make sure that you set the offsets to match the lo-

cation of the cards. Note: these cards can be stacked, but if more than two of them are stacked, the carriage will collide with them if you print at zero media height. Always check the height if you use multiple stacked cards so that they match the height of your media and the set the carriage height accordingly.

Underlay Board to Reduce Artifacts

Introduction

When printing on thin, flexible, or porous media, the holes in the vacuum table of the printer can cause print artifacts (sometimes referred to as “dimpling”). If you encounter this problem when printing, you may need an underlay board between the media and the table to reduce the problem.

Purpose

To reduces print artifacts (dimples) on thin or flexible media.

When to do

If you use a thin media that shows dimples that correspond to the holes in the vacuum table, then you may need to use the underlay board beneath your media to avoid this problem. The underlay is made of a porous material that will allow the vacuum system to hold the media in place without causing artifacts.

Before you begin

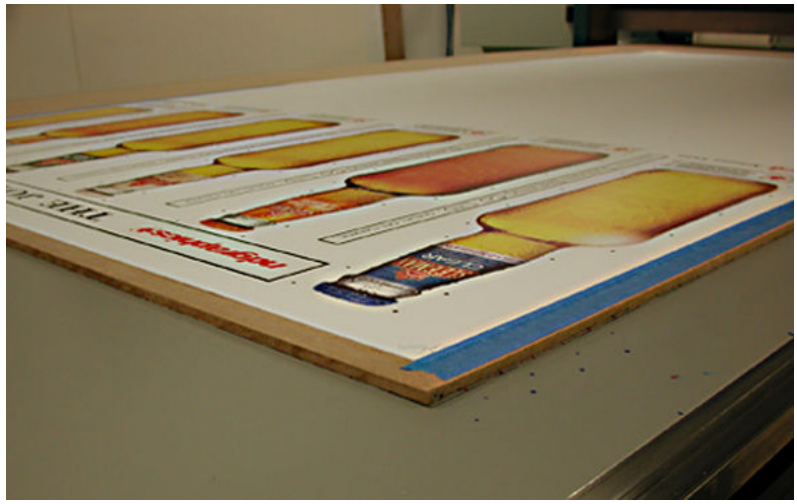
To reduce artifacts you may need a Medium Density Fiber (MDF) underlay board. This board is not available from Océ Display Graphics Systems. You must source the underlay locally (these porous boards are used with routers that require vacuum tables, which may help you locate a local supplier). If you can't source an underlay board locally, here is a possible source for them.

North American contact information (a suggested source - other sources of similar products may be available. For other areas, check your local hardware and router supply stores):
THERMWOOD Corp.
904 Buffaloville Road
PO Box 436 DALE, IN 47523
USA Contact: Melanie Tullis
Tel.1-800-221-3865 Ext. 266
email: Melanie.Tullis@thermwood.com

You can get more information from their website: http://www.woodworkerswholesale.com/

Note:
If you use the underlay board, make sure that you cover over any areas of the board not covered by the media or the vacuum pressure will be reduced. Also make sure that there are no high spots that could cause a carriage collision.

Illustration



[69] Underlay Board with Media

How to Prepare the Underlay Board

1. Seal the edges of the underlay board with tape or use a liquid sealer to prevent vacuum leaks through the edges of the board.
2. Cover any area of the board not covered by the media to avoid vacuum loss.

Tips On How to Use the Underlay Board:

1. Use scrap pieces of media to cover any exposed area of the underlay board that the carriage will travel over. This prevents the board from lifting off the table and colliding with the carriage.
2. It may be necessary to bleed the vacuum by opening, or partially opening an additional vacuum zone to reduce dimple artifacts.
3. Confirm that the underlay thickness is added to the media thickness and set correctly.

Chapter 6
How to Operate the Océ Arizona 550 XT

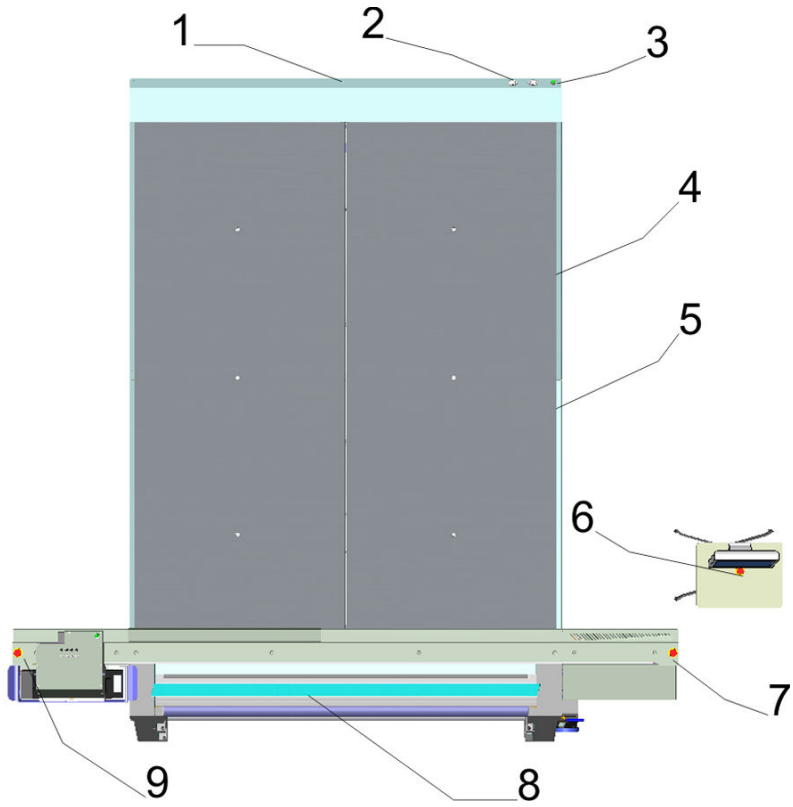
Océ Arizona 550 XT Specifications and Features

Introduction

The Océ Arizona 550 XT is similar to the Océ Arizona 550 GT in the following areas:

- Gantry
- Carriage
- RMO capable
- White ink option

The Océ Arizona 550 XT printer has a larger table and requires two single phase AC power circuits. The second circuit is dedicated to two vacuum pumps. These pumps provide vacuum for the three vacuum zones. The zones and how they are used are described in the next section.
The unique features and specifications of the Océ Arizona 550 XT are documented in this chapter. All other features and specifications for the Océ Arizona 550 XT are the same as those for the Océ Arizona 550 GT.



[70] Arizona 550 XT Hardware

Arizona 550 XT Hardware Description

Label	Hardware Description
1	Center Zone Vacuum Manual Valve
2	Vacuum Gauges for Zones 1 and 2
3	Print Start Button
4	Foot Switch 1 for Zone 1 and Center Zone
5	Foot Switch 2 for Vacuum Zone 2
6	Operator Control Station Emergency Stop
7	Gantry Emergency Stop
8	Roll Media Option
9	Carriage Emergency Stop

Definition

The Océ Arizona 550 XT is a four or five color flatbed inkjet printer capable of producing large format images on various rigid and flexible media. The printer consists of a flatbed vacuum table and moving gantry.

The Océ Arizona 550 XT printer supports media up to 2.50m x 3.05m (8.2 x 10 feet). This allows you to print on 2.5m x 3.05m media or on multiple panels of 1.25m x 2.5m (4'x8') in size. The table is designed so that two pieces of media can be mounted in separate vacuum areas of the flatbed table and while one is being printed, the other can be changed (see the section, "How to Print with Dual Origins" for more details).

Maximum Media and Print Sizes

Maximum	Width	Length	Bleed
Media Size	2.50m (98.4")	3.05m (120.1")	n/a
Print Size	2.51m (98.8")	3.06m (120.5")	Allows for a max. 5mm (0.2") bleed, all edges

Features Unique to the Océ Arizona 550 XT

- The extra width of the Océ Arizona 550 XT flatbed printer enables it to be used in a continuous imaging mode for rigid media.See "How to Print With Dual Origins" for details.
- The large flatbed table ships in two sections that are joined on-site, enabling easy installation.
- Table supports media up to 2.50m x 3.05m (8.2 x 10 feet)

How to Use the Océ Arizona 550 XT Vacuum System

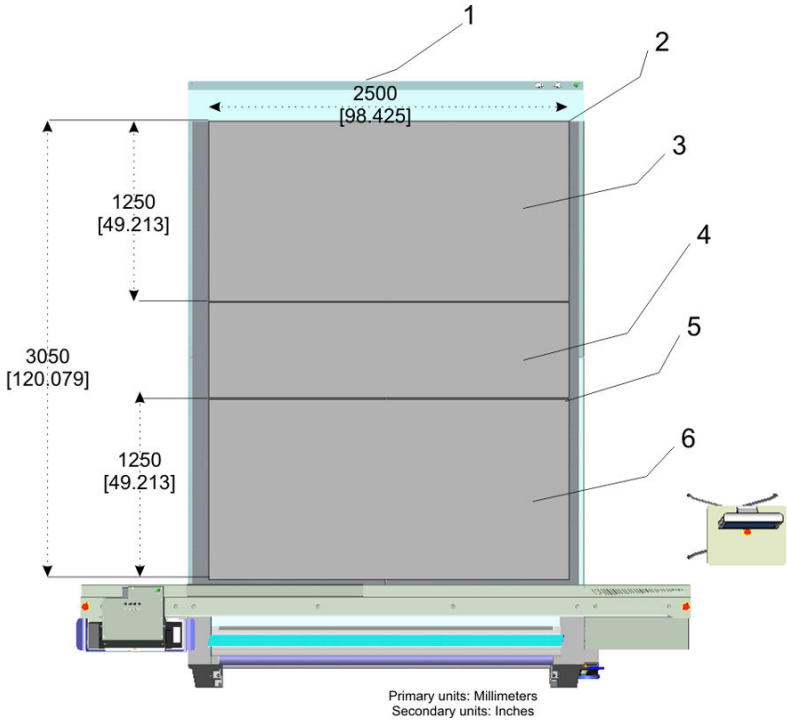
Introduction

The Océ Arizona 550 XT uses a low-flow, high-vacuum system to secure rigid media for printing on the printer table. The vacuum field is created by three fabricated aluminum overlay sheets placed on the surface of the table. Two vacuum pumps are used to evacuate the chamber of air between the aluminum sheets and the table. For best results, all of the holes on the top surface of the overlay sheet connected to an active vacuum zone must be covered by media.

The table surface of the Océ Arizona 550 XT is divided into 3 vacuum zones. Two independent vacuum pumps provide vacuum to the table. Pump 1 provides vacuum to Zone 1 and the Center Zone. The operator can control vacuum flow to the Center Zone with the manual On/Off valve. Pump 2 provides vacuum to Zone 2. The independent control of the zones allows the operator to print in a Dual Origin configuration with minimal down time. For example you can remove a printed panel and register a new panel in Zone 1 while printing continues in Zone 2. In this example you would turn the Center Zone valve to the Off position.

The printer ships with a vacuum field configured to support the maximum allowable media size (European Configuration - 2.5 x 3.05 meters). At the time of installation (or later) the perimeter of the vacuum field may be reconfigured to the maximum media size for a North American installation (4'x8'), if necessary.

Note:
Unlike the vacuum tables of the Océ Arizona 550 GT models, the Océ Arizona 550 XT does not have vacuum relief valves to adjust the intensity of the vacuum, so it is either On or Off. Because of this lack of relief valves, there is no possibility to create custom zones as you can with the other models.



[71] Arizona 350 XT Vacuum Zones - European Configuration

Vacuum System Zones

Label	Description
1	Center Zone On/Off Valve
2	Print Origin 1
3	Zone 1
4	Center Zone
5	Print Origin 2
6	Zone 2

You can change the outer perimeter of the vacuum table with perimeter foam tape. However, we recommend that you keep the original perimeter of the vacuum table and mask off areas to achieve a different dimension for the working table area, if required.

Note:
For the perimeter of the printer table use only the black neoprene foam tape part # 3010106699. Do not use the gray foam tape (part # 3010106701) as it is used only to create custom zones, and this feature is not available with this printer model. Note that the tape is a not a commercial item and is not available for direct sales to customers. Please see your local service representative for this tape.

Purpose

The vacuum system holds the media in place on the printer table. The zones are arranged to accommodate common media dimensions. If a zone is activated, you must mask off any part of it that is not covered by the media. If an image is larger than a single zone, both vacuums must be On before you can print that image.

Before you begin

Turn the vacuum on for the zone where media is placed. Make sure all unused areas of an active vacuum zone are masked off. Use the vacuum gauge to determine if a zone is properly masked. When the active zone is properly masked the gauge will read at 20"Hg (68 kPa) or higher. Small leaks can reduce this number and therefore the efficiency of the vacuum. Porous media can also degrade the vacuum effect.

Note:
If the vacuum gauge for an active zone reads below 10"Hg (34 kPa) and you have ensured that the area is properly masked and taped off, you may have a leak in the vacuum system. Place a service call only after you determine that the zone is correctly masked and the gauge reads consistently low.

How to Activate a Zone

1. Place the media on the table.
2. The media can occupy more than one zone, but if a zone will be active, all of the area not covered by the media must be masked so that all vacuum holes are covered.

Note:
If the Center Zone is not occupied by media it can be turned Off with the manual valve located at the Zone 1 end of the printer. Also, if you use a full bleed in your print job, use material of the same or less thickness as the media to mask off any exposed vacuum areas.

3. Activate the zone (or zones) you wish to use either with the icon on the command bar of the Print Job module or with the matched foot switch (1 or 2) on the floor.
4. Start the print job either with the Start icon on the command bar or with the Start button located near the vacuum gauges.
5. De-activate the zone with either the icon or the foot switch once the image is printed.
6. Remove the media.

How to Print With Dual Origins

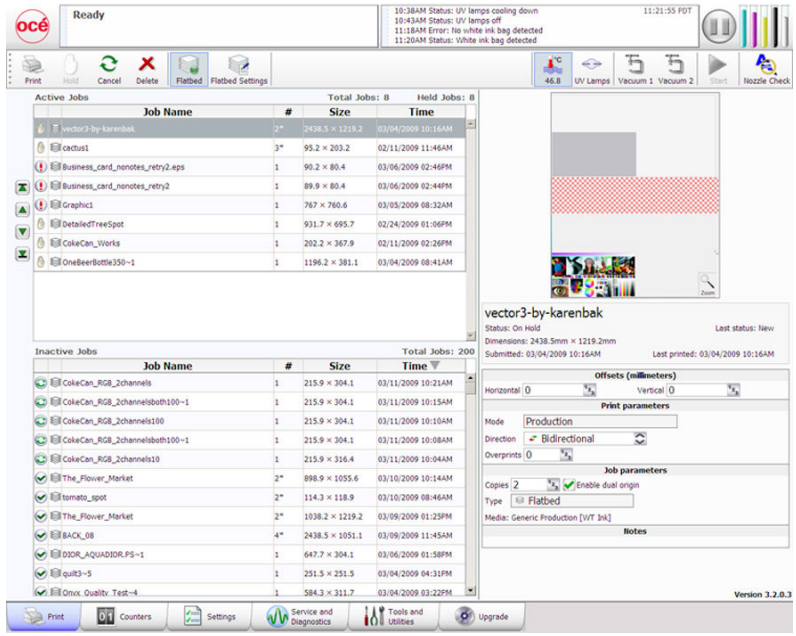
Introduction

Due to the larger table size and the vacuum zone arrangement of the Océ Arizona 550 XT printer, it is possible to print with Dual Origins on alternate multiple panels up to 1.25m x 2.5m (4'x8') in size. When you print the same image on multiple panels the table design and the software interface allows you unmount media and then mount another piece of media while the printer continues to print on a second piece of media in the other zone. This is referred to as "Dual origin" printing and this section explains how it is done on the Océ Arizona 550 XT printer.

Purpose

If you need to print more than one copy of a specific print job and the image is not larger than Zone 1, you can enable Dual Origin printing. This will reduce the amount of time the operator's attention is required to manage a multi-copy print job.

Illustration



[72] Dual Origin Print

Dual Origin Print Jobs

1. Add your image to the active print job queue and then select it.
2. Enter 2 or more copies in the Job Parameters Copies field.
3. Click on the Enable Dual Origin box when it appears to make it active.

Note:
If the dimensions of your image are greater than the size of vacuum Zone 1, Dual Origin printing is not possible. The option to select it will not appear on the Print parameters menu.
When Dual origins is enabled, a scaled view of the image appears on the screen preview in Zone 1 and a gray-scale box that represents the image appears in Zone 2. Both images are displayed at their respective origin points. If you move the primary image in Zone 1 to a new origin (or enter new offsets), both images will then print from that changed relative origin point.

4. Place media in Zone 1, mask off any unused areas, and then turn On the vacuum.
5. Press the Start button to begin the print in Zone 1.
6. Place media in Zone 2, mask off any unused areas, and turn On the vacuum. The printer will pause over the Center Zone after the Zone 1 print is complete and then start to print in Zone 2.

Note:
The printer will not print in Zone 2 if the vacuum is not On. It will display "Waiting for Table Vacuum" and wait in the Center Zone until the vacuum is On and then will also require that you press the Start button. The vacuum must be cycled Off and then On again in alternating zones before the next print will begin while Dual Origin is enabled.

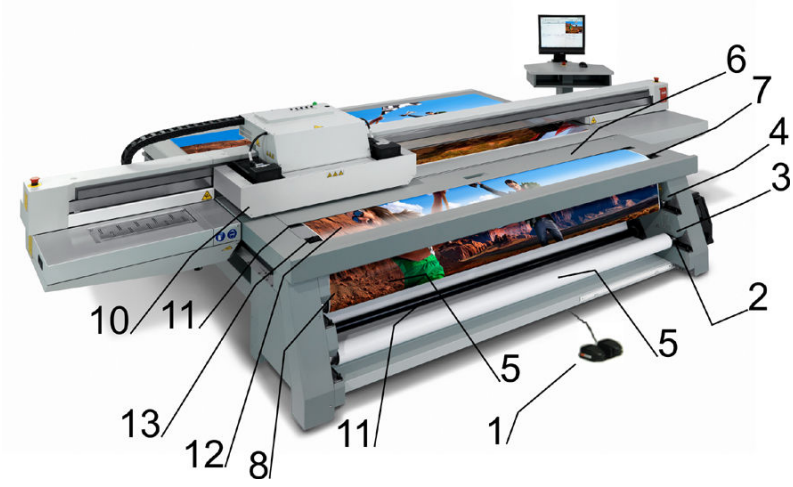
7. If additional copies of the print were indicated in Step 2, then repeat Steps 5 to 7 (in alternate zones) for the total number of prints required.

Chapter 7
How to Operate the Roll Media Option

Roll Media Option Hardware

Introduction

The base configuration for the Océ Arizona 550 GT is a flatbed printer where the media is static during printing. A Roll Media Option (RMO) is available for the printer that allows the use of media that is supplied on a roll. This optional unit is manufactured, crated, stocked and shipped as an independent assembly. Once the Roll Media Option is installed, it shares the print gantry with the printer.



[73] Roll Media Option Components

Component Locations

Roll Media Hardware

Component	Function
1) Dual Foot Pedal Switch	7) Media Cut Guide
2) Media Drive Couplers	8) Media Core Locks
3) Supply Shaft Motor	9) Media Tension Bar
4) Take-up Shaft Motor	10) Carriage Guard
5) Media Shafts	11) Capstan
6) Media Access Door	12) Platen
	13) Gimbal

Hardware Function table

The Roll Media Option consists of a supply media drive, media tension bar, capstan roller, vacuum platen, media gimbal, media edge detection sensor, and a take-up media drive. This system accurately advances the roll of media during printing. The roll media is positioned with a high resolution media encoder as it moves past the carriage printheads. This ensures accurate and high quality prints on various core media.

Roll Media Hardware

Component	Function
1) Dual Foot Pedal Switch	The dual foot pedal switch is located on the floor under the RMO unit. It is used to control media feed in both forward and reverse directions. Function varies depending on whether media is loaded or unloaded.
2) Media Drive Couplers	The couplers keep the media shafts in place and engaged to the drive motor. In the open (horizontal) position they allow the media shafts to be removed.
3) Supply Shaft Motor	Drives the supply media shaft.
4) Take-up Shaft Motor	Drives the take-up media shaft.
5) Media Shafts	The shafts hold the roll media core in place. This can be an empty core for take-up or a core with a roll of media for supply. The media shaft has a large track roller at one end, and a drive coupler at the other. The media shaft is designed to slide inside a roll of media with a 3" cardboard core. It uses spring-loaded core locks to lock the roll of media to the shaft. The locks are engaged or released with a 5mm hex key. The media shaft supports the media roll, provides aligned positioning of the media roll in the printer, and drives the transport of material on the media roll.
6) Media Access Door	This door opens to provide access to the roll of media for media loading. It also eliminates a possible shear hazard to the operator between the carriage and the roll unit endplates. The door has a safety interlock switch. If the door is open no carriage or gantry motion can be initiated at the printer.
7) Media Cut Guide	A gutter (slot) between two pieces of sheet metal that serves to guide a blade to cut the media.

Component	Function
8) Media Core Locks	These locks hold the media core in place on the media shafts. Use the supplied 5mm hex key to lock and unlock the media core at the right end of the media shaft.
9) Media Tension Bar	Provides constant tension for loaded media (located behind the lower media shaft). The bar provides tension to ensure steady movement of the media.
10) Carriage Guard	The Carriage Guard protects the Operator from exposure to UV light and it also protects the lamps and the carriage by stopping all motion if it encounters an obstacle in the path of the carriage.
11) Capstan	The capstan is a large roller that is coated in precision ground rubber. A high resolution encoder is mounted at one end. A brake is installed at the opposite end to stop media drift while imaging. *Note:* The capstan must always be clean and smooth. Always clean any kind of debris that might collect on it, especially UV inks (See Maintenance section for cleaning instructions).
12) Platen	The top surface of the platen is populated with vacuum holes. The underside is relatively closed in order to maintain a negative pressure inside the platen. A series of fans on the bottom of the platen create the negative pressure that helps to hold the media in place while an image is printed.
13) Gimbal	Maintains alignment of the media on the take-up shaft. It is spring-loaded to prevent drift or skewing of the media. The gimbal is located between the platen and the take-up shaft.

Roll Media Theory of Operations

Introduction

The Roll Media Option system operating specification is described in terms of the following states:

- Media Load
- Media Unload
- Media Initialization
- Media Printing
- Media Manual Feed
- Media Idle
- Media End of Roll

For each user state, software control of the roll of media and consequent media movement is achieved using one of the following two control modes.

- Non-Initialized Control mode
- Initialized Control mode

Non-Initialized Control Mode

The default control mode for the Roll Media Option motion system is the non-initialized control mode. This mode is active:

- When the printer first powers up
- During the Media Load function
- During the Media Unload function
- After a Media End of Roll has been detected

Initialized Control Mode

In order for printing to occur, the printer must be in initialized control mode. Initialized control mode can only be achieved after a successful media initialization. This mode is used during the following states:

- Media Advance
- Media Idle
- Media End of roll detected
- Media Manual Feed

Introduction to Media Loading

Loading and threading roll media is a manual process. A media shaft is required for both the supply and take-up media rolls. The function of the shaft is to provide additional core support and a non-slip drive condition between the drive motors and the media

rolls. The media shafts must be inserted in to the supply media roll and take-up media core before they can be loaded. The media shafts are inserted manually and are automatically locked in place by a spring-loaded media shaft drive couplers. In order to thread media from the supply roll to the take-up roll the operator uses a foot pedal to control the take-up media drive. The foot pedals allow the supply media to be driven forward or reverse in non-initialized control mode. While media is being driven forward the operator can manually guide the media under the media tension bar then up and over the platen. The forward and reverse drive directions can be used to help position the media to facilitate taping to the take-up media core.

Refer to media threading label on the Roll Media Option for details on how to thread the media when loading. The media roll can be threaded to print either print side out or print side in.

Note:
For optimum printing results it is recommended the media be aligned such that no more than a 1mm offset exists between the supply and take-up media rolls.

The Roll Media Option design does not have a media drive pinch. Therefore, all printing requires the media to be taped to the take-up media core. Once the media has been taped to the take-up core the operator selects the icon Initialize.

Media Initialization

A media supply roll must be installed, and media threaded and taped to the take-up core before you can initialize the media. The media initialization process prepares the printer for printing after the operator selects the Initialize icon in the Roll Manger. When the initialization is complete, the system will switch to the initialized control mode and is ready for printing.

Introduction to Media Unloading

Select the Unload Media icon from the printer software to change the control mode from initialized to non-initialized. . At this point the supply shaft pays out a small amount of media until the media tension bar is in the zero position (stationary-sitting on the media ramp). This is required so the media tension bar does not fall down if the media cannot be held stationary by the vacuum platen during the cutting process. The Unload Media command changes the functionality of the foot pedal switches to the following:

During this mode the system monitors the position of the media tension bar and the supply roll. If upward media tension bar motion or forward supply roll motion is detected, the move is interrupted, motion stopped, and the user is notified to cut the media or otherwise remedy the situation.

The Cancel command returns the media tension bar to its original position (this is assuming the media has not been cut) to be ready for printing. The Load Media command assumes the media has been cut and therefore goes through the full Load media function.

Media Manual Feed

This enables the operator to advance or rewind loaded media using the foot-pedal controls in the initialized control mode. This allows the operator to rewind media in order to view previously printed images on the printer and to advance back to its original media position. Press a foot pedal switch to move the media at the lowest possible speed. Release the switch to decelerate the media to an idle state.

Media End of Roll

The control system automatically detects an end of input roll condition, independent of media to core attachment method.

Roll Media Option Specifications

Introduction

The Roll Media Option available for the Océ Arizona 550 GT printer allows the use of various flexible media that are supplied on a roll. Specifications such as the print area available, supported media size and thickness, and the amount of waste associated with the use of roll media are indicated in this section.

Note:
The Océ Arizona 550 GT and the Roll Media Option must be operated in accordance with the environmental conditions specified in the Océ Arizona 550 GT Site Preparation Guide and all safety requirements noted in this document.

Media Size Supported

Width (Max.): 2.2m (86.6")
Width (Min.): 0.9mm (36")
Roll Diameter (Max.): 240mm (9.45")
Core Inner Diameter: 76.2mm (3")

Print Size Supported

2.190m (86.2")

This allows for a minimum 5mm (0.2") border. This is necessary to ensure the platen is not contaminated with ink due to possible media tracking errors. Cured and uncured ink on the platen will have a serious effect on printer performance. Any spilled ink must be removed immediately (See RMO Maintenance section). If an image exceeds the 5mm border requirement, printing will not be allowed to proceed.

Maximum Media Thickness

This value is not officially specified. It is theoretically possible for the RMO system to accommodate media up to 3mm (0.11 inches). However, most media at or near that thickness will have problems in the transport mechanism of the RMO unit.

Maximum Supported Weight

Media Width (mm)	Max. Weight kg (lbs)
$900 \leq x < 1220$	28 (62)
$1220 \leq x < 1480$	40 (88)
$1480 \leq x < 1780$	45 (100)
$1780 \leq x \leq 2200$	50 (110)

Leader & End of Roll Waste

Leader Waste: 560mm (22 inches)

Leader waste is the amount of media that cannot be printed between the roll media platen and the take-up media roll. This waste is produced every time media is loaded, taped to the take-up core and initialized in preparation for the first print. Trailer waste is the media that cannot be printed at the end of the supply media roll. This will vary slightly depending on the attachment method that was used to secure the media to the media core.

End of Roll Waste (minimum possible): 920mm (36 inches)

End of roll waste is the media that cannot be printed at the end of the supply media roll. This will vary slightly depending on the attachment method that was used to secure the media to the media core.

Foot Pedal Switch Functions

Introduction

The foot pedal switches are used to control the forward and reverse movement of media shafts.

Summary of Dual Foot Pedal Switch Functions

The following table indicates the foot pedal functions for various RMO states. It may help to think in terms of how you drive a car: left foot on the brake holds back, while right foot on the accelerator moves forward.

Actions for foot pedals in various states

	Media Reverse		Media Forward	
RMO State	**Left Hold**	**Left Tap**	**Right Hold**	**Right Tap**
Load Media	Rewinds media onto supply shaft	Unlocks media supply shaft	Advance media from supply shaft	Unlocks take-up shaft
Initialized	Rewinds media	n/a	Advances media	n/a
Unload (before media cut)	**Important:** Don't touch the pedal switches Media is positioned for cut when you click on the Unload icon Cut the media, then proceed with unload			
Unload (after media cut)	Unwinds media from the take-up roll	Rewinds media and unlocks the supply shaft	Winds media back onto the take-up shaft	Winds media and unlocks the take-up shaft
Media End of Roll	Rotates the supply shaft in reverse	Rotates the supply shaft to unlocked position for removal	Rotates the take-up shaft to wind media onto the shaft	Rotates both supply and take-up shafts to unlocked position for removal

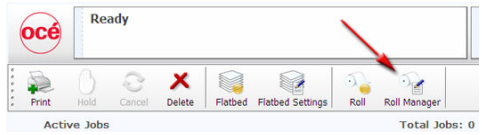
Roll Media Manager

Introduction

The Roll Media Manager is the area of the printer software where you prepare to print on roll media. With this menu you can load and unload media, change media type and parameters, and initialize the printer to prepare it to print on roll media. This section introduces the icons in the Roll Media Manager that are necessary to load and initialize a roll media print job. How to set the Media parameters and print the job is explained in the section "How to Print on Roll Media".

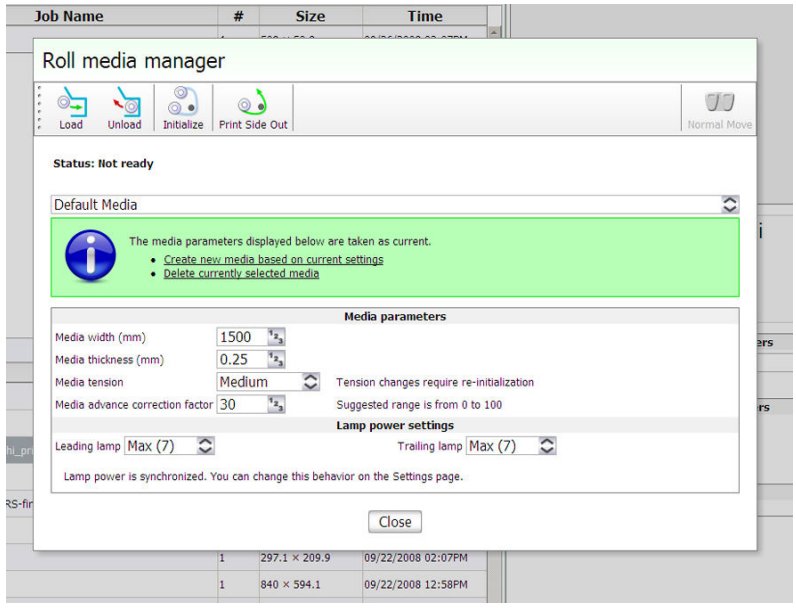
How to Access the Roll Media Manager

Click on the Roll Manager icon in the command toolbar of the Print Job module.



[74] Roll Manager icon

The Roll media manager is displayed in the center of the screen.



[75] Roll Media Manager

Roll Media Manager Menu

Roll Media Manager Icons

Icon	Function
Load	Allows the operator to load new media. Set the foot pedal switches to the Load state.
Unload	Prepares the RMO to allow the operator to cut the existing media, remove it, and replace it with a new roll.
Initialize	Sets up tension on the loaded media and prepares the RMO to print on that media.
Print Side	Operator can select either Print Side In or Print Side Out. Print Side In allows you to print on the back side of the media. The default setting is Print Side Out.
Normal Move / Slow Move	Normal Move is the default state. When you click on this icon in the top right corner, it changes to Slow Move. Use Slow Move when you want to advance or rewind media and stop it at a more precise position. It causes the dual foot pedal switches to move the media more slowly.

How to Use the Roll Media Manager

The procedures to use these icons to load and unload media is explained in the next two sections. How to verify or change media parameters and to actually print a roll media job is explained in the section "How to Print on Roll Media".

How to Load Media

Introduction

This section explains all of the actions associated with loading a new roll of media when the Roll Media Option is installed. It also specifies in detail how to perform particular actions.

Load Media

The following actions are associated with loading media:

- A) Load Supply Media Roll On Media Shaft
- B) Load Take-up Empty Core On Media Shaft
- C) Thread media
- D) Initialize Roll Media To Prepare For Printing
- E) Select Existing Or Create New Media Parameters

When to do

This section explains how to load new media when none is currently loaded. If media is already loaded, first read the section How to Cut and Unload Media.

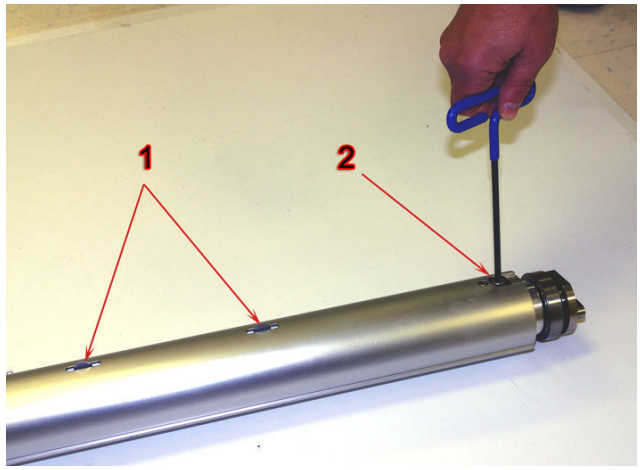
Required tool

- 5mm hex key

Note:
Check that the media is evenly rolled on the core with no bumps or extrusions. Also check that it is aligned to avoid telescoping (lateral displacement) as it winds onto the take-up shaft.

A: Load Supply Media Roll On a Media Shaft

1. Place an empty media shaft on a suitable flat work area, positioned as shown, so that the hex key is inserted on the right side of the shaft to lock and unlock the core locks.



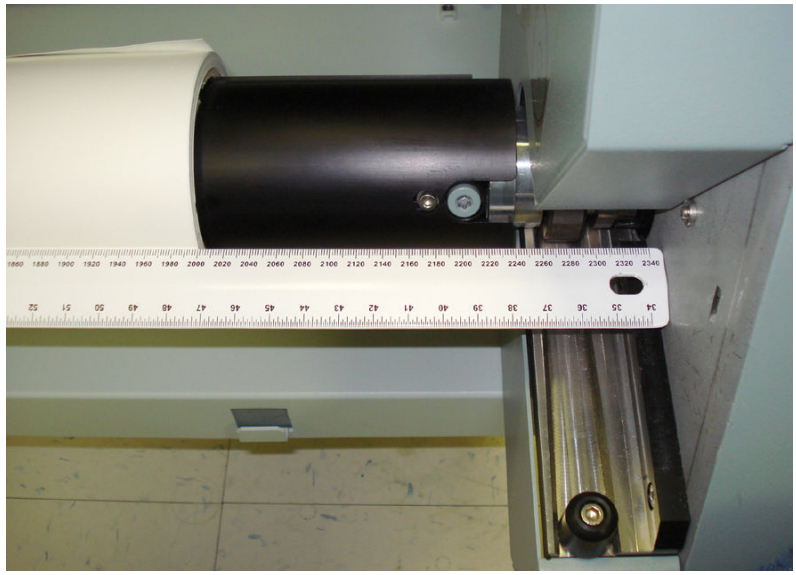
[76] Unlock the Media Shaft Core Locks

2. To unlock the media shaft core locks (1) turn counter-clockwise with the supplied 5mm hex key (2).
3. Slide a new roll of media onto the supply shaft.

Note:
Determine first whether you need the roll to be print side out or in. "Print side out" means that the media unrolls from the bottom of the shaft. "Print side in", means that the media unrolls from the top of the shaft (see the diagram in section C "Thread the Media").

4. Roughly center the roll on the shaft, and then insert the shaft into the Supply (bottom) position on the printer.

5. Accurately center the media using the supplied ruler. Media should be centered within 1mm on the ruler (or 5mm if you use the edge detector sensor.



[77] Ruler to Center Media

Note:
The supplied ruler has both metric (millimeters) and imperial (inches) scales. When a media roll is centered on the shaft, and the ruler is placed as shown in the photo, the value on the ruler scale will match the width of the roll. For example, in the photo a 2 meter (or 2000mm) roll is centered on the media shaft.

6. Lock the supply media shaft core locks with the 5mm hex key.

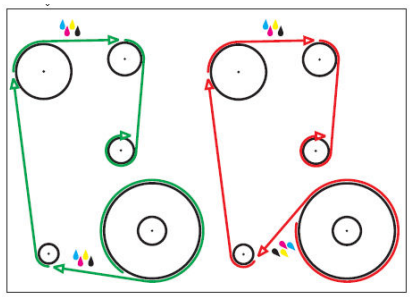
B: Load an Empty Core and Install in the Take-up Position

1. Place the empty take-up media shaft on a suitable work surface and unlock the media shaft locks with the 5mm hex key.
2. Slide an empty media core that is at least as long as the supply media width onto the take-up shaft.
3. Roughly center the core and then insert the shaft into the Take-up (top) position on the RMO unit.
4. Center the core using the supplied ruler so that the take-up media can be aligned to the supply media roll when it is later threaded.
5. Lock the take-up media shaft core locks with a 5 mm hex key.

C: Thread the Media

1. Select the Load icon from the Roll Media Manager.
2. If you are going to print with "Print Side In", click the icon in the Roll Media manager ("Print Side Out" is the default so you do not need to select it unless you have recently used Print Side In). Note that the icon toggles from one choice to the other when you click it.

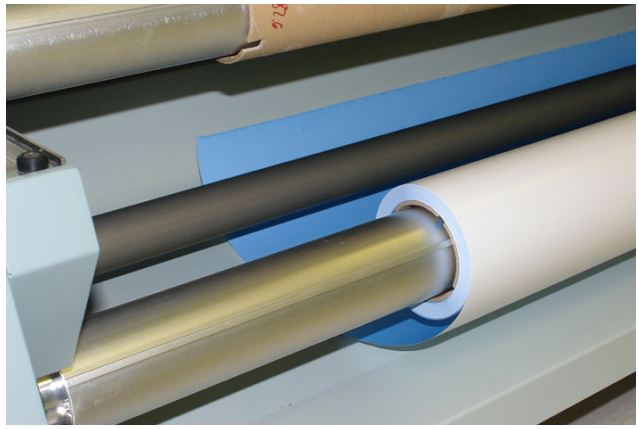
Note:
For Print Side Out, the media unrolls from the bottom the supply shaft as shown in green on the left below.
For Print Side In, the media unrolls from the top of the supply shaft as shown in red on the right below. This allows you to print on the "back" side of the media.



[78] Media Path Choices

3. Wait for the gantry to move part way across the table.
4. Continually press on the right foot pedal, as required, to gradually advance the media for the next two steps.

5. Thread the media under the media tension bar (Note that the media is threaded for Print Side Out in the photo below).



[79] Thread Media Under Tension Bar (Print side out)

6. Open the media access door at the top of the Roll Media unit, then reach down through the open door to grasp the media and feed it up and over the take-up roll.

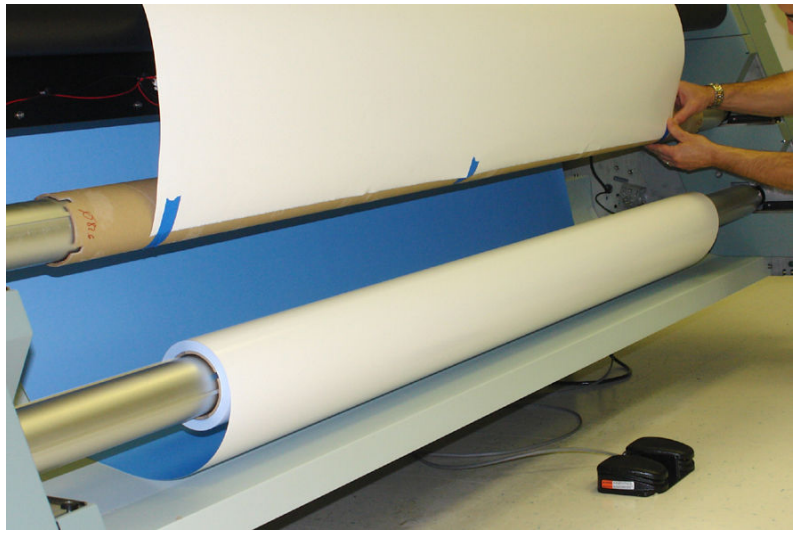
[80] Feed Media Through Access Door

7. Check alignment of the media by feeding it down to the supply roll and make sure that the edge lines up with the edge of the supply roll.

[81] Line Up Edge of Media to the Supply Roll

8. Rewind the media by continually pressing down the left foot pedal until it is positioned where it can be taped to the take-up core.

9. Tape the media onto the core. The media should have a clean straight edge prior to taping. First tape the center of the media to the core, and then tape both ends of the media.



[82] Tape Media to the Take-up Roll Core

Note:
Ensure that the media is flat along the core. If the media is not flat it can create an uneven roll that affects the motion of the media past the printheads and therefore the quality of the image.

10. Use the supplied ruler to check that the take-up roll is centered within 1mm (or 5mm if you use the edge detection sensor).

D: Initialize Roll Media To Prepare For Printing

1. Select the "Initialize" icon from the Roll Media Manager to properly tension the media and to prepare for printing.

E: Select Existing Or Create New Media Parameters

1. From the Roll Media Manager select the media to be printed on or create a new set of media parameters for the media loaded. Refer to the Roll Media Manager section for details.

Result

You are now ready to print. Refer to the How to Print on Roll Media section for instructions

How to Unload and Cut Media

Introduction

This section explains all of the actions associated with how to cut and unload media when there is still some media left on the supply roll.

Note:
If the media supply roll is empty, simply remove the empty supply shaft and the take-up shaft. Then replace the roll of media from the take-up position with a new roll and put the shaft into the supply position. Then you can use the empty core from the supply position as the take-up shaft.

Unload Media Summary

The following actions are associated with unloading media:

- A) Move the Media to Cut Position
- B) Cut the Media
- C) Remove Media from Take-up Shaft in Printer or Remove Take-up Shaft
- D) Remove Supply Shaft From Printer
- E) Remove Media Roll Or Empty Core From Media Shaft

When to do

This procedures details the actions required to unload media when there is still some media left on the supply shaft. When the supply shaft is empty there is no need to cut or rewind the media.

Required tool

- 5mm hex key

A: Move the Media to Cut Position

1. Use the right foot pedal to advance the media so that the area where you want to perform the cut is positioned over the media cut guide (if you advance too far you can rewind it with the left foot pedal).

B: Cut the Media

1. Click on the Roll Manager icon to bring up the Roll Media Manager.
2. Select the Unload icon in the Roll Media Manager to release the tension on the media so it can be cut.
3. Cut the media with a blade along the cut guide.
4. Click on OK to proceed.

C: Remove Media from the Take-up Shaft in Printer or Remove Take-up Shaft

1. If there are only a few images on the take-up roll and you want to remove them without removing the take-up roll from the printer you can press the left pedal to rotate the take-up media shaft in the reverse direction. You can then roll up the media by hand as comes off the take-up roll.
2. The other option is remove the take-up roll from the printer and then remove the roll of unused media from the media shaft. To remove the take-up roll, tap the right pedal momentarily to rotate the take-up shaft one revolution to the unlocked position in the forward direction.

D: Remove the Supply Shaft From the Printer

1. If you want to change the supply shaft, momentarily press the left pedal to rotate the supply shaft four complete revolutions. This rewinds excess media back onto the supply roll if is not empty) to the unlocked position.
2. Remove the supply shaft from the printer by pulling it up and out of the drive coupler.

E: Remove Media Roll Or Empty Core From the Media Shaft

1. Place the media shaft on a suitable work surface.
2. Unlock the media shaft core locks using a 5 mm hex key.
3. Slide the media core off the shaft.

Result

Roll Media unit is now ready for you to load new media.

How to Set Up a Roll Media Job in ProductionHouse

Introduction

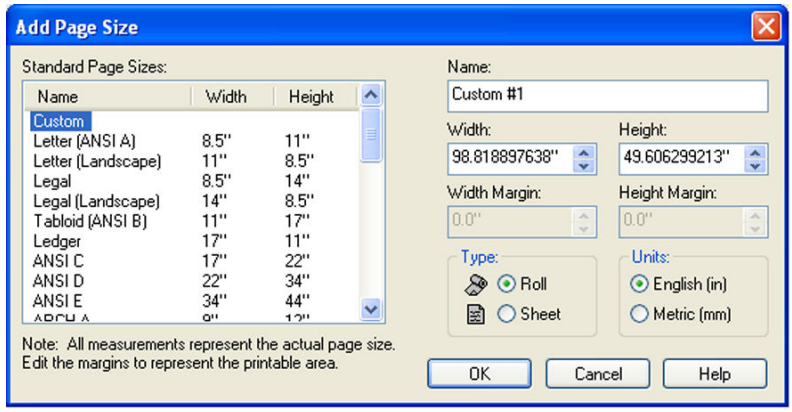
Print jobs can be specified as either a roll job (Roll) or a flatbed (Sheet) job in ProductionHouse. The specification of either type of job can also be changed after the print job is transferred to the printer in the Print Jobs module.

Purpose

The operator can choose the type of desired print job and also put a hold on it so it will not print automatically.

Set up the Roll Job Option in ProductionHouse

1. When you set the page size for your print job, click on Type: Roll to make it a roll media option job.

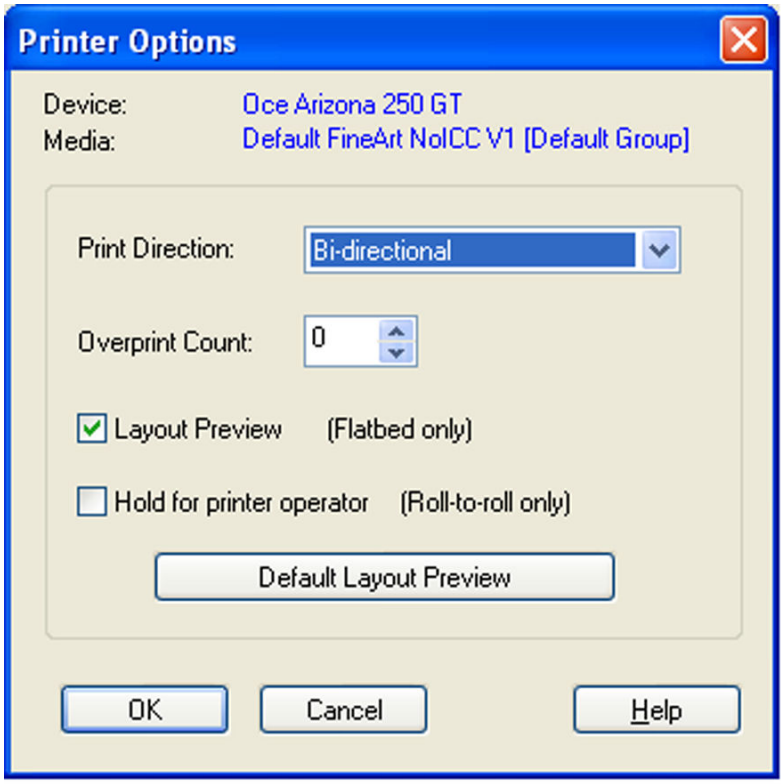


[83] Onyx Page Size - Roll Option

Set a Hold on a Roll Job

1. To ensure that your roll media print job is held and not automatically printed, click on the box in front of "Hold for printer operator" when you set the print options in ProductionHouse.

Note:
If you don't set a hold in ProductionHouse, it is also possible to disable the Roll media print queue at the printer. To do this click on the Roll icon in the command toolbar of the Print Job module so that it become dim (grayed out). This will stop any roll media jobs from automatically printing.



[84] Onyx Roll Hold

Note:
The Hold for operator is not selected in this illustration since the default is unchecked. If you want to initiate a hold, click it to select.

Result

The operator has a lot of flexibility in the control of roll media print jobs and whether they print automatically or not.

How to Print on Roll Media

Introduction

If media is loaded and the Roll Media unit has been initialized, the printer is ready to print an image. Use the Print Job module and the Roll Media Manager to prepare and start the print.

Note:
All Roll media operations that involve media movement are disabled while a Flatbed job prints.

How to Print on Backlit Media

If your roll media is transparent or opaque and you are going to backlight the image and you want to increase the density, set Quality mode in ProductionHouse. Then click on the Quality parameter in the Print Job menu and select Quality-Density before you initialize the job. This mode increases the density of ink for this image as it prints and therefore improves the appearance of backlit images.

Before you begin

Media must be loaded and initialized as explained in the section "How to Load Roll Media".

Attention:
The red Emergency stop buttons do NOT stop the media transport when you print on roll media (they only stop gantry and carriage movement). If you encounter a situation where the roll media runs continuously without operator input, the only recourse is to shut off the printer's AC power switch.

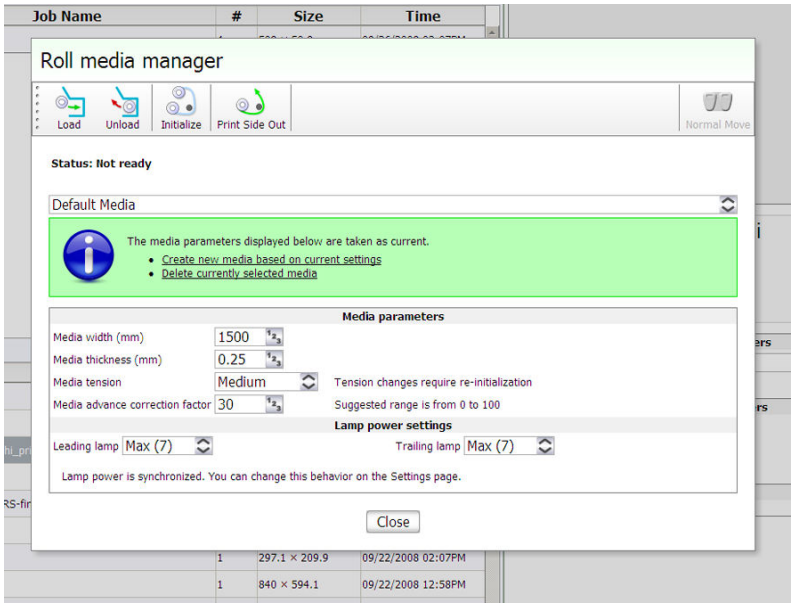
Prepare a Roll Media Print Job

1. Click on the Roll icon in the menu bar of the Job Control module to disable the RMO print queue (this allows you to check media parameters before the job actually prints in case the job was not given a Hold status when it was generated in Onyx ProductionHouse).

[85] Roll Icon

2. In the Print Job Control module, transfer a print job from Onyx ProductionHouse.

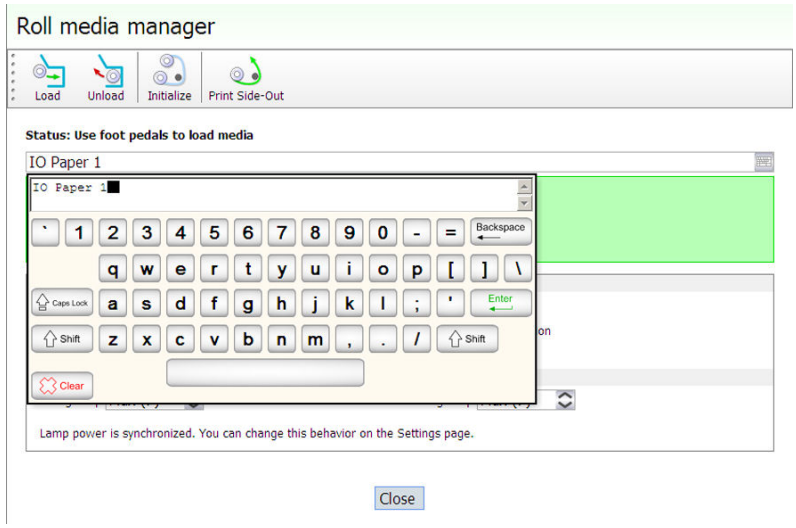
3. Click on the Roll Manager icon to enter the Roll Media Manager dialog window.



[86] Roll media manager

4. Enter the Media width for the roll media that you have loaded.
5. Check that the rest of the media parameters displayed match the particular media you loaded.
6. You can create a new media or edit an existing one by changing the parameter values and then saving them under a new media name. When you create a new media it takes the current values as default and automatically creates a unique media name based on the existing name. You can change the assigned name by selecting characters from the virtual keyboard.

Note:
Any changed parameter in the dialog window will be applied to the next roll media print job, even if the change was not saved. This allows temporary changes to the parameters without the need to save that media.



[87] Roll Media Manager Keyboard

Note:
If you have used a media before, it will be listed in the Media Type pull-down menu in alphanumeric order. If the list contains less than 10 media types, a drop down list is displayed. If there are more that 10 media types, they are displayed in a dialog with a scroll bar. If you make any changes to the media name or parameters the advisory pane will change color to indicate that there are unsaved changes and will display relevant commands.

Note:
There is always at least one media in the list that is called Default Media. It cannot be deleted, but you can change its parameters if you want to use it. If you choose to delete it, the parameters will go back to its original values, but the item will still appear in the list.

7. Select the Media Tension

Note:
The Media tension option allows you to choose the amount of force placed onto the media shafts to keep it tightly drawn as it moves through the RMO unit. The low tension setting is usually fine; however, if the media shows significant puckering across its entire width, the medium or high tension setting may be required.

8. Select the Media Advance Correction Factor

Note:
Leave it at 50 unless you see light or dark lines of banding in the printed image (refer to the next section "How to Set the Media Advance Correction Factor for more details).

9. When the displayed media values are correctly matched to the loaded media, click Close to exit the Media Manager.
10. Click on the Roll icon in the menu bar of the Job Control module to activate the RMO print queue (the icon will change from yellow to green).

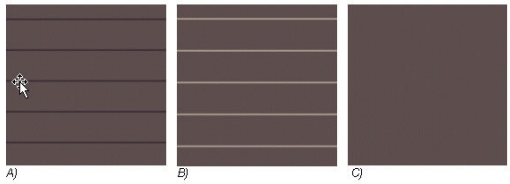
Result

Any print jobs that are in the queue, not on hold, and marked as roll jobs will print. There is no explicit confirmation required to start a roll media print job. Any roll media jobs in the print queue will start to print immediately.

How to Determine Media Advance Correction

Introduction

As roll media passes over the capstan, the stress can cause the thickness to deviate from its ideal, non-stressed state. This deviation can result in incorrect capstan encoder readings, and lead to discrepancies in the amount the media advanced during each print swath. This can cause banding to occur, in the form of either dark lines or white gaps. The figure below illustrates this banding.



[88] Media Advance Banding

Note:
The actual thickness of the white gaps or dark lines in this figure may be thinner than shown here.

- A) Understep can result in dark lines, where the media has not advanced enough and the placement of a swath overlaps the prior swath.
- B) Overstep can result in white gaps, where the placement of a swath is displaced a significant distance away from the prior swath.
- C) Perfect Step, where media advances correctly.

Purpose

The Media Advance Correction Factor (MACF) is a value that you can associate with media that exhibits this banding to eliminate the effect. This section documents the procedure to arrive at the ideal MACF for a particular media.

When to do

The MACF is only required when this particular banding occurs. If you don't see any banding in your images, there is no need to change the value from its default setting of 50.

Before you begin

If roll media is not correctly loaded, banding that looks like under/over stepping can result. If a media shows significant tension deviation across its width, or if it telescopes significantly (identifiable by the edges of the media on the Take-up roll), it is difficult to accurately find the correct MACF. If the media telescopes, reload it before you start the correction procedure. One tell-tale indicator of telescoping and significantly varying tension is to look at the Media Advance Correction Print near the sides; if under stepping banding occurs on one side, and overstepping on the other, the banding is not the result of an incorrect correction factor, rather it is possibly due to an improper media load.

How You Determine the MACF

In the 'Roll Media Manager' menu you can select the 'Media Advance Correction Factor' (MACF) and enter a value from 0 to 100. The default value is 50. You can enter a lower value to correct for white gaps or raise the value to correct for dark lines.

To arrive at the MACF for a given media, a Special Print is used. The print images a series of colors that are used to identify a range where no white gaps or overlap (dark lines) are evident. Depending on the given media, some of the colors may be more susceptible than others to this banding (this is why more than one color is present on the test print). The test print used for the calibration of the MACF can be found in the Special Prints module. It is called the Media Advance Correction Factor print.

Procedure to Determine the MACF for Upper Limit Value

1. Click the Roll Media icon to bring up the Roll Media Manager.
2. Enter a large value for the media advance correction factor, (say 75) and print the image. Verify that white gaps are present (spaced a swath width apart); if they aren't, enter a larger value and reprint (continue until the white gaps are noticeable).
3. Once gaps are verified, reduce the correction factor value by 10 or 5 and reprint. Continue reducing the value and reprinting the test image until white gaps are no longer visible. At this point fine-tuning can be done if desired, changing the correction factor by values of around 2 or 3 to determine the exact spot banding occurs; this level of accuracy usually isn't necessary. Record this value as the high end of your MACF range.

Procedure to Determine the MACF for Lower Limit Value

1. Enter a low media correction value (say 15), and verify that noticeable understepping occurs, in the form of dark lines spaced a swath width apart.
2. Once understepping swaths have been verified, increase the media correction value by 10 or 5, stopping when you no longer see dark lines (Again, finding the exact value where

banding occurs can be performed, though it is usually not necessary). This is the low end of your MACF range.

Note:
With some media, the more dense (darker) colors may still show thin lines when the correction factor is close to being correct (due to edge of swath banding); in this case it may be wise to use the lighter colors to calibrate the correction factor.

Apply the Optimal MACF to the Current Media

The above procedure provides two values where neither white gaps nor dark lines are present. The median value of this range is entered in the MACF field in the Roll Media Manager. The given media profile (media thickness, tension, MACF, and lamp power settings) can then be saved in the Roll Media Manager, and used whenever that type of media is present.

1. Open the Roll Media Manager.
2. Enter the media value in the MACF field.
3. Click on "Create new media from current settings".

Note:
You can either save the media with the same name or create a new name for the media.

Result

When you use the same media in the future, it will always have this media advance correction factor associated with it.

How to Use Media Edge Protectors

Introduction

Some media tend to have dust and fiber that clings to the edge of the media roll. When released near the RMO (Roll Media Option) unit platen, these particles can find their way into the printhead nozzles and cause dropouts that reduce image quality and produce banding.

When to do

When you use roll media that has fibers on the edge of the roll, use the media edge protectors to stop this material from entering the active print area where the carriage moves across the platen. The edge protectors are disposable and are intended to extend the time between printhead cleanings when fibrous media is used.

Note:
If you use media that is known to have to have "fuzzy" edges you can sometimes minimize the problem by cutting or burning the debris off.

Required tool

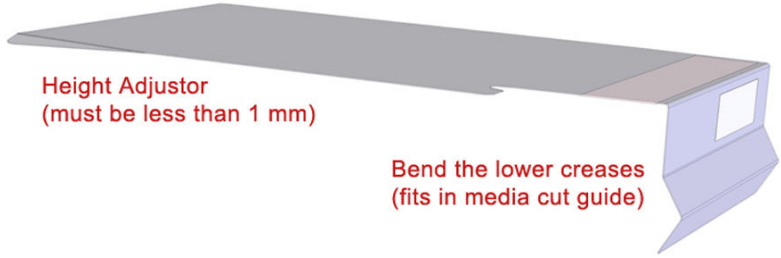
- A package of edge detectors is included in the Accessory kit that ships with the RMO unit. If you run out, you can purchase it as a consumable item (see you local sales representative).

How to Apply the Media Edge Protectors

Note:
There are both left and right edge protectors and they are both labeled (a left protector has the height adjustor, the arc and the indent on the right side, while the right protector is reversed).

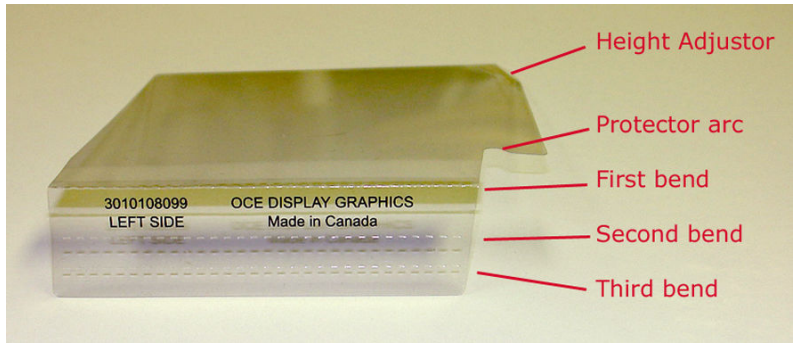
1. Bend the bottom edge of the protector along the first crease (located above the label with the part number) to approx 90 degrees.

2. Bend the other two creases slightly so that they have a V shape when viewed, as illustrated in the side view figure below.



[89] Side View of Media Protector

3. Bend the height adjustor (small triangle in the top corner of the edge protector) slightly and then straighten it again. This results in a slight bend (no more than a media thickness), that allows the media edge to move more freely under the protector.



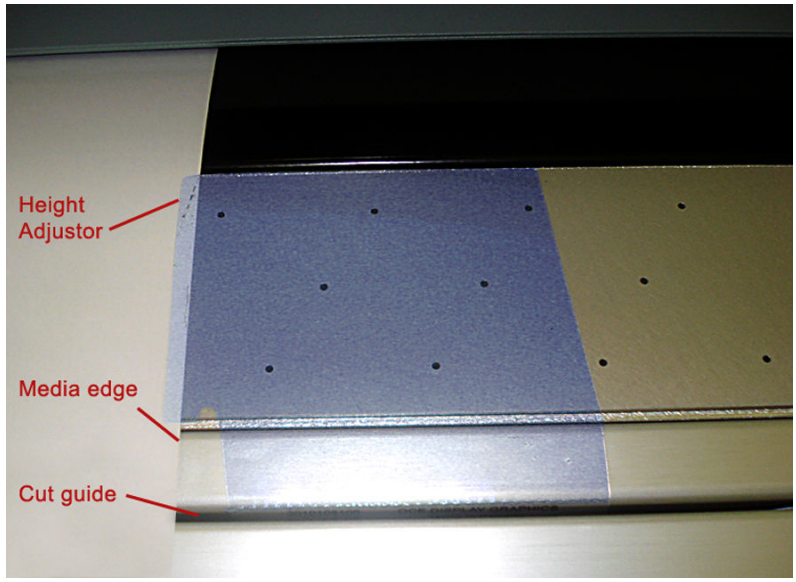
[90] Media Edge Detector Height Adjustor

Attention:
If the height adjustor area is higher than 1 mm from the platen, there is a possibility that the carriage may hit the edge of the protector and thus damage printhead nozzles.

4. Peel the backing layer from the double-sided tape on the back of the protector.
5. Place the bent edge of the protector into the media cut guide, but do not press down on the tape yet.
6. Slide the protector towards the media edge until the inside edge of the height adjustor is positioned over the media edge (see figure below).

Note:
Do not let the plastic edge near the arc butt up against the media edge or the device may not let the media pass smoothly.
The vacuum in the platen will hold the main part of the protector in place while the image is printed.

7. Press down on the tape to fasten the protector in this position.



[91] Edge Protector in Position

Note:
The adhesive on the edge protector can be re-used approximately ten times. If you find that it is not holding the protector in place, then use a new one.

Result

The media edge protectors will reduce the amount of fiber and other debris. However, it is important to keep the platen and cutting guide areas clean as indicated in the Roll Media maintenance section.

How to Deal with Wide Media

If you use media of the maximum width for the RMO (2.2m or 7.2 feet) that requires media edge protection, you can cut the protectors in half in order for them to fit.

Chapter 8
How to Use the Static Suppression Upgrade Kit

Reduce Static with a Static Suppression Kit

Introduction

The Océ Static Suppression Upgrade Kit is a Commercial Product that can be ordered as part # 3010106603. If you are experiencing static-related imaging problems this optional upgrade kit contains an ionizer bar that provides a solution to reduce static. Some rigid media can have a large static surface charge. If the charge is high enough, ink can be repelled from the media. This ink mist can show up as cloudy areas in white sections of the image. Static not only causes these printing artifacts, but can also result in excessive ink accumulation on the bottom of the carriage.

Note:
You must have at least printer software revision 1.7 or greater, installed to support the static suppression ionizer bar.

Purpose

Ionization is a solution to the problem of static. A common print industry method of controlling static electricity is the use of ionization. For the Océ anti-static bar to be effective, it must be close to the media. The bar uses AC current to create positive and negative ions, which are attracted to the unbalanced surface of the material. This neutralizes the media and ink is more readily accepted. It is important to note that static electricity cannot be entirely eliminated; only reduced. To eliminate static electricity, something physically would have to be done to the conductivity of the material.

Humidity is also important to control static. Static-related print issues can be greatly reduced by an increase in print environment humidity. While most media will print without difficulty at humidity levels between 30 and 50%, thermoplastics will print more successfully when humidity is above 40%. Some locales, such as desert areas frequently deal with very low humidity, while other regions only experience this at certain times of the year. If a printer is installed in a low-humidity area and/or a large volume of printed work is on media that is prone to static, we recommend the installation of a humidity control system.

When to do

Why Static is a Problem
Many standard print materials such as PVC and acrylic are electrical insulators, and the static charge generated and held by these materials can provide some printing challenges. Thermoplastic materials are the most common static-laden print media. Static-prone materials tend to attract dust and hair and release charges that can be felt and seen.

How to Activate the Static Suppression Ionizer Bar

1. Press the Settings tab on the printer interface screen.
2. Click on the Printer icon.
3. If the Ionizer Bar option is set to Off, set it to ON (this option is not displayed if the ionizer bar is not installed).

Note:
Once you have set it to On, it will always automatically turn on at the beginning of a flatbed job. Unless you use media that you are certain does not require static reduction, there is no need to turn if Off as the bar is only active when the printer is printing.

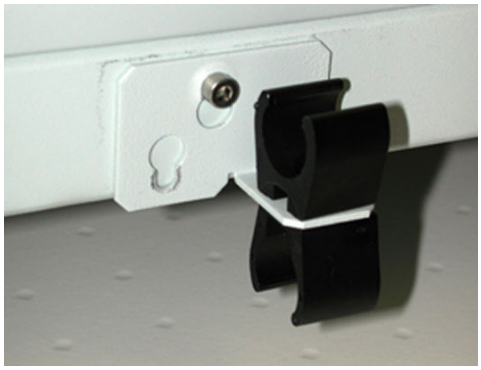
How to Change the Height of the Bar

The Ionizer bar is mounted by default to accommodate media up 13mm (0.5 inches) in height. If you need to use media that has a thickness of greater than 13mm you will have to reverse the mounting brackets. When the brackets are reversed the maximum thickness of media that can be used with the ionizer bar is 38mm (1.5 inches).

1. Turn off the printer power switch.
2. Press down on the ionizer bar first from one end and then the other to release the bar from all four brackets.

[92] Remove Static Bar

3. Loosen the bracket mount screw and then slide the bracket up in the keyed slot to remove it.



[93] Bracket Mounted Low

4. Turn the bracket 180 degrees and then fit the other keyed slot over the bracket screw.
5. Slide the bracket mount until the screw is located in the smaller end of the keyed slot.

[94] Bracket Mounted High

6. Make sure the bracket is level an then tighten the bracket mount screw.
7. Repeat Steps 2 to 5 until all four mounts are reversed.

Result

The printer can now use media with a maximum thickness of 38mm (1.5 inches).

Chapter 9
How to Work With White Ink

Operator Guidelines for White Ink

Introduction

This chapter is necessary only if you have an Océ Arizona printer with the white ink option included. Due to the nature of the white ink, regular maintenance is required to keep the white printheads functioning properly. This is important even when white ink is not actively used.

In printers with this option, the white ink is re-circulated in the system to limit any settling of the ink. For this to take place, **the printer must be left powered on at all times**.

Daily maintenance is even more essential with the white ink option as it will purge out a small amount of white ink in order to keep the printheads clear and operating reliably. White ink may require additional purges.

Before you begin

If your printer includes the white ink option, all 5 ink bags must be present and all must contain ink in order for the printer to function properly.

Attention:

Daily maintenance is important even when White ink is not being actively used. Failure to perform daily maintenance, even when white ink is not used, can result in nozzle dropouts or even printhead damage.

Important: How to keep white ink operational

1. Agitate the white ink bag gently as described on the bag label at least once a week.
2. Perform Printhead Maintenance at least one time every workday, even if the printer is not used.

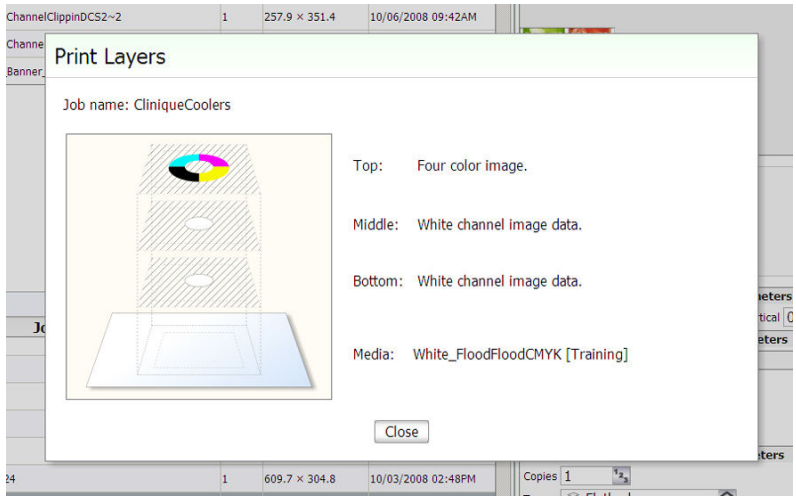
White Ink Workflow Overview

Introduction

Océ Arizona printers with the White Ink Option provide under-printing for non-white media or objects, over-printing for backlit applications on transparent media and/or printing white as a spot color.
This section describes how the printer provides white ink support, gives a summary of the workflow data preparation, and also shows some of the ways white ink can be used in print applications.

Definition

When the white ink information is properly prepared according to the methods described in this chapter and the print job is sent from ProductionHouse to the printer, you have an opportunity to verify that the layers are properly embedded in the job.
With the white ink print job selected in the Job Control module of the printer software, click the Layers button to activate a graphical representation of the Print Layers that allows you to verify the layer order.



[95] Preview Layer in Printer UI

Spot Versus Flood Layers

White layers can take two forms: Flood Fill layers and Spot Data layers.

- A Flood Fill layer is like an autofill that is done by the printer, where white data fills the entire bounding box (the rectangular area that defines the total perimeter) of the image.
- White Spot data can be defined in image editing applications such as Adobe Illustrator® or with the Spot Layer tool in Onyx ProductionHouse.

All of these methods to create white ink output will be explored and explained in this chapter.

White Ink Workflow Data Preparation

White ink print job output can be accomplished in a variety of ways depending on the desired results and preferred working process. There are three primary methods and they can be used either independently or all at the same time. The workflow options are:
Flood Fill Layer Configuration,
ProductionHouse's Spot Layer Tool, and
White Spot Data Image Preparation.
Flood Fill Layer Configuration in an Onyx Media Model does not require any pre-rip file preparation and is the easiest method of achieving white ink output. All that is required is to set up the Layer Configuration to include a flood layer. Spot data cannot be processed in this way, as functionality is limited to creating a flood layer, which encompasses the bounding box (the outer border of the image) of the file being processed.
ProductionHouse's Spot Layer Tool offers many options to process an image, and thus allows various possible configuration choices. You can save these configurations as Filters and place them in a Quick Set and this makes it possible to re-create with minimal effort settings that are often used. All work with the ProductionHouse Spot Layer tool requires a media with spot layers enabled in the layer options in order for it to work as expected.
White Spot Data Image Preparation requires that the white data be prepared in image editing programs such as Adobe Illustrator® or PhotoShop®. You must use specific naming conventions and image use protocols in order for the Onyx RIP-Queue software to process the data as desired. This method may be the best choice if the desired white ink spot data includes complicated selections or if data is being created for outsourcing. A reasonable level of proficiency in these programs is recommended to use this technique.

All of these methods can also be used either alone or in conjunction with each other to create the desired output results. For example, you may generate the spot layer information for parts of an image in PhotoShop and then go on to specify a Flood Layer Configuration in Production House. This can result in a Flood Layer and a Spot Layer followed by a CMYK Layer. The spot data and the flood will occupy two layers of white density and the CMYK image data can occupy the third layer. You can determine the print order of these layers in ProductionHouse.

White Ink Applications

The following are some specific examples of the ways that the white ink workflow can be applied.

- **Backlit Application**
  The backlit application involves printing onto a transparent or translucent material and mounting the finished piece onto a light box or location where illumination from behind is possible. In the backlit application, white ink is intended to provide a light diffusing layer. This application is possible using either 2 or 3 layers.
- **Day-Night Application**
  Similar to backlit, the day-night application also involves printing onto a transparent or translucent material. A day-night print can be viewed either front-lit or backlit. This is achieved by printing color data on two separate layers with a white diffusing layer in the middle.
- **Opaque Application**
  The opaque application involves printing CMYK data onto non-white media. For this application, white ink is required both to enable the printer to produce images where white forms part of the image content, as well as to act as a base for the CMYK color set.

White Ink Layer Options

Application	Bottom	Middle	Top	Notes
Backlit First Surface (printing on the front side of the media)	White	CMYK	CMYK	CMYK layers contain same data.
Backlit Second Surface (printing on the back side of clear media)	Reverse printed CMYK	Reverse printed CMYK	White	
Day-Night (First or Second surface)	CMYK	White	CMYK	CMYK data is printed reverse or right-reading
Opaque	White	White	CMYK	3 layers
Opaque	<empty>	White	CMYK	2 layers

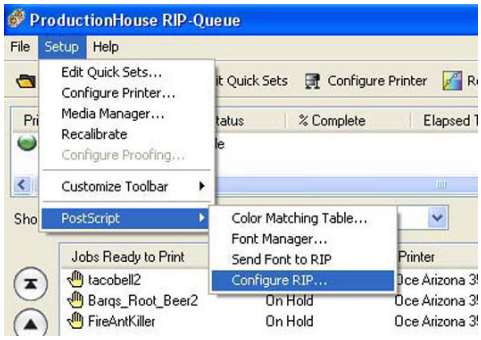
How to Configure ProductionHouse for White Ink

Introduction

This section describes how to configure ProductionHouse to recognize white ink workflow elements and thus allow you to apply the approach that is best for your print job application. In order for ProductionHouse to successfully address white ink work flow data, there are options in the software that must be configured.

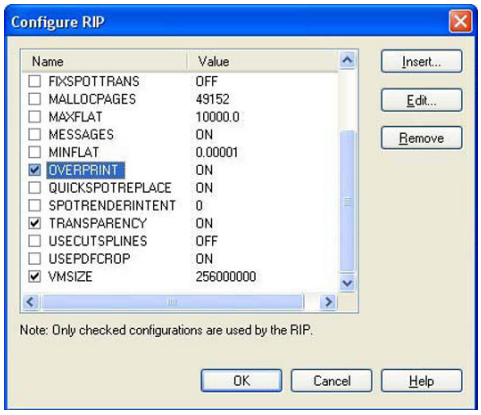
How to Configure ProductionHouse

1. Within Rip-Queue access the Configure Rip Options Palette.

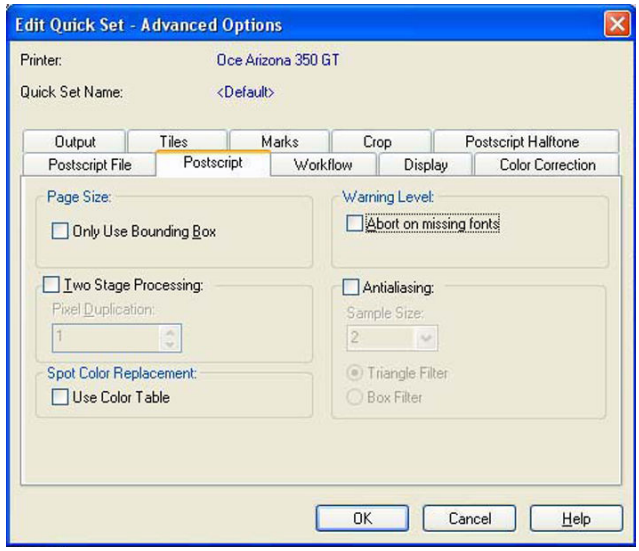


[96] Set up Onyx RIP

2. Once here, ensure that Overprint is turned on (checked).



3. In your Quick Set, or in Preflight/Job Properties/Postscript turn off two-stage processing (make sure the box is not checked).



[98] Turn off Two Stage Processing

Result

ProductionHouse is now prepared to accept print jobs with white ink data.

QuickStart

Introduction

This section shows you how to print a simple job with a white flood fill.

Purpose

This exercise will help you get familiar with some of the basic concepts involved when you print images with white ink.

Before you begin

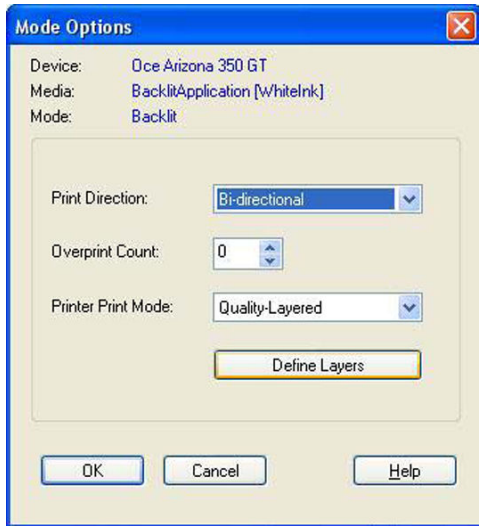
Obtain and import a media model that is set to Quality-Layered print mode.

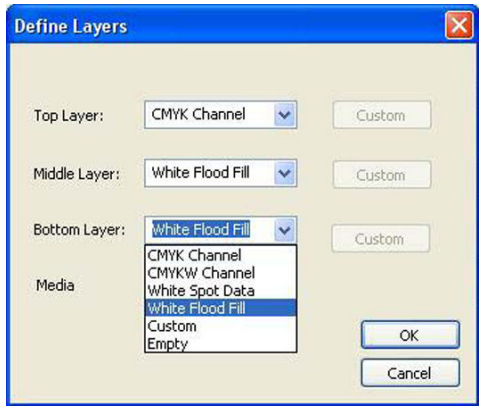
Note:
Sample Media models for white ink are available for download from the DGS website: www.dgs.oce.com/. These media are documented later in this chapter (see How to Use Media Models to Print With White Ink).

How to Print a Simple Job Using White Ink

1. Open an image of your choice using the media with a Quality-Layered print mode.
2. Take the printer offline in ONYX RIP-Queue so the job will not be automatically sent to the printer.
3. Process/rip the job.
4. Define one of the data layers as a white flood layer.

To define a white flood layer, modify the printer settings of a processed job in RIP Queue - right click the job, edit printer settings, select Quality-Layered for the Printer Print mode, then select Define Layers





If you want to print first surface (e.g. opaque media) the bottom and middle layers can be configured to be white flood layers and the top layer to be a CMYK data layer. If you want to print second surface (e.g. transparent media viewed from side that does not have ink on it), then the bottom layer should be a CMYK data layer and the middle and top layers white flood layers.

5. Put the printer back online in ONYX RIP-Queue and send the job to the printer.

Note:
To preview the layer order in the image, click Layers in the printer software.

6. Print the job.

How to Prepare White Ink Print Jobs

How to Create a White Flood Fill Layer

Introduction

When working with white ink you can choose the workflow that best fits your needs. There are three main approaches to white ink workflow with your printer:

- **Flood Fill Layer** - uses the Flood Fill Layer Configuration.
- **Onyx Spot Layer Tool** - generate the white spot data in ProductionHouse.
- **Spot Data (pre-defined)** - spot data is created in image editing application such as Adobe Illustrator or PhotoShop.

This section documents the Flood Fill Layer approach. The next two sections document the other two approaches.

Purpose

The Flood Fill Layer allows you to print an image with a white flood fill as an underlay an overlay. The edges of the image bounding box (the outer perimeter of the image) will determine the extent of the flood fill area.

When to do

This approach is used when an image to be printed is rectangular in shape and requires a white flood fill. The printer itself provides the white flood fill rather than the ONYX Spot Layer Tool or an image editing application, so no additional data preparation is required.

Note:
If jobs are nested in the ONYX software, white is printed between jobs when you use this technique because the outer extent of the entire nested job is used to define the flood area.

How to Prepare a White Food Fill Layer

1. Open the print job in ProductionHouse and use a media that includes the Quality-layered print mode.

Note:
The file must be sized at the final output dimensions required for the flood.

2. Define one of the data layers as a white flood layer.
   To define a layer as a white flood layer first select Quality-Layered as the Printer Print Mode, then select Define Layers and finally define a white flood layer.
   Layers can be defined at any of the following locations when a job is processed:
   - Defined in the media when the media is created - Mode Options
   - Selected in a Quick Set - Media Options
   - Modify the printer settings of a processed job in RIP Queue - right-click the job, edit printer settings.

Note:
If you want to print first surface (e.g., on opaque media) the bottom and middle layers can be configured to be white flood layers and the top layer to be a CMYK data layer. If you want to print second surface (e.g., transparent media viewed from the side that does not have ink on it), then the bottom layer should be a CMYK data layer and the middle and top layers are white flood layers.

3. Send the job to the printer, click Layers to verify the layer order and then print the job.

How to Create Spot Data with the Spot Layer Tool

Introduction

In this section, you'll learn how to access and set up the Spot Layer Tool. The tool provides a variety of options for generation of spot layers, and you may want to explore them with a sample file of your own to familiarize yourself with the functionality. Remember that any actions you set for this tool will only work successfully when used in conjunction with properly constructed layers. The tool is located in Preflight on the Color Correction tab.

The Spot Layer Tool provides options for generating spot layers for your image in ProductionHouse rather than in image editing programs such as Illustrator or Photoshop. The tool has many advanced options and this section will explain them so that you can set them up to best achieve your desired results. The tool options and settings to use it for white spot data creation are listed here and are followed by instructions to access the tool.

The Spot Layer Tool Provides These Options:

Generation Options - Set Media

Set media color is optional and serves two purposes:

- If you want to preview the media color in Preflight, you can set the media color either from the image or from the color dialog menu.
- If you have areas in your image that use the media color and you want that color to be handled with special consideration. For example; if you want the media color from the image to show through the design, you must first define your fill options, then set the media color and define the Media Color Handling Options as either "Spot Knockout" or "Full Knockout".

Note:
The generation options are used in combination with the fill options, except when the media color handling is set to "No Knockout". If you want to use the Spot Layer Tool to create flood fills, underlay fills or mask fills it is not always necessary to set a mask or media color to get the desired results.

To set the media color: Click the sample box to activate the color picker or use the drop down arrow to access the Color Dialog menu.

Generation Options - Set Mask

The mask allows you to determine the area that you wish to print with white ink. Setting the mask color is optional. The default mask color is white so if white is the color you want to mask, then setting this is not a required step. If the image you are printing contains

white data in more than the mask area, you will need to set up a different background color not used anywhere else in the file to use as your mask. This must be done in an image-editing program prior to bringing the image into the Spot Layer Tool.
To set the mask color: Click the sample box to activate the color picker or use the drop-down arrow to pick the color from the preview.

Generation Options - Media Color Handling

If you have set a media color, you have three options for how you would like the media color to be handled. The term "Knockout" means to remove from the selection. If you've set a media color, chances are you want some portion of the design to be removed to use the media color. These are the option you have to choose from:

- ■ No Knockout - If you've set a media color to help you visualize your output, choose this option. This will print the image and spot data with no knockout.
- ■ Spot Knockout - If you choose this option, RIP-Queue removes the spot data anywhere the image data matches the media color that you set. Use this option when you want to knockout the spot data but still print the image data that matches the media color.
- ■ Full Knockout - If you choose this option, RIP-Queue removes the spot data and the image data anywhere the image data matches the media color that you set. Use this option when you want to knockout the spot data and the image data, allowing the media to fully show through.

Spot Channel

The Océ Arizona 550 XT has only one spot channel available. The name that appears here should be the one you used to create the media in Media Manager.

Flood Fill

This option generates a flood fill for the entire image by combining the underlay and mask fills together. When you check this option, the underlay and mask fill sliders lock together and are set at 100%. You can change the opacity for the flood fill by moving either of the sliders.

Underlay Fill Opacity

This option generates a fill in the selected spot channel where image data exists. The fill will be generated anywhere image data does not match the mask. For example, if your image is on a white background and the default (white) mask is used, this option will create a fill for all non-white data.

Mask Fill Opacity

This option generates a fill in the selected spot channel where mask data exists. The fill will be generated anywhere the image data matches the mask color. For example, if your

image is on a white background and the default (white) mask is used, this option will creates a fill for all white data.

Choke and Spread

Choke reduces the outer edge of the underlay. Use choke when you want to eliminate white from peeking out of the edge of your image. Spread increases the outer edge of the underlay fill. Use spread when you want a deliberate halo around the edge of your image. Choke and Spread work in tandem. Each mark on the slider represents 1 pixel width of choke or spread up to 10 pixels (+-) .The actual preview in Preflight is exaggerated from what is printed. This exaggerated display makes it easier for you to see the results from moving the slider. When you use the Spot Layer Tool for masks, we recommend a choke value of 3 ticks.

Diffuse Edge

Use this option when you want a gradual transition from the underlay to the mask to create a soft edge for the fill. We do not recommend use of this option.

Filter

Once you've defined your settings, save them by exporting a Filter to use on similar jobs. Filters are a global color correction that can be applied to Quick Sets to automate the printing process for multiple jobs that use the same settings.(*'How to Create and Use Quick Sets'* on page 205)

Note:
Many of the Quick Set and Filter settings for a job can be overridden in RIP-Queue or Preflight, if desired.

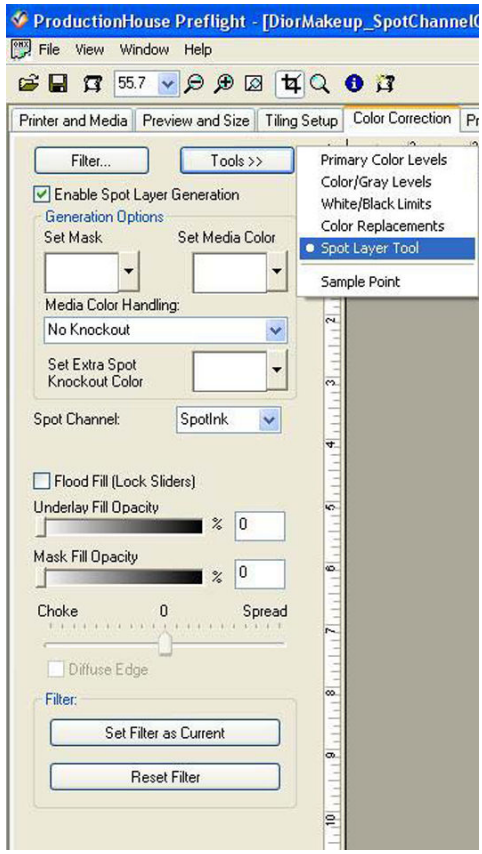
How to Use the Spot Layer Tool

This manual assumes that you have some experience with graphics applications and with Onyx software. If you prefer a self-guided and hands-on tutorial, Customer Application Bulletin 22, "How to Use the Spot Layer Tool for White Ink Workflow" provides a simplified method to print with white ink. It guides you through a simple tutorial that shows how to prepare an image for quick and easy white ink print production with spot data. You will learn how to isolate the white area of your image in Illustrator so that it will be recognized by the Spot Layer Tool and then printed as white by the printer.
Download Application Bulletin 22 from the Customer Support web site: www.dgs.oce.com/.

How to Access the Spot Layer Tool

1. Open a print job in Preflight.
2. Select the Color Corrections tab.
3. Click on Tools and select Spot Layer Tool. This will open the feature set.

Note:
If the Enable checkbox won't activate, the media you used to open the job has not been configured with the Quality-Layered print mode. Create or Edit your media to support spot ink in Media Manager before you open the job in Preflight (or download a white ink media model from the web site).



[101] Spot Layer Tool

4. Check Enable Spot Layer Generation to activate the tool.
5. Use the explanations of the Spot Layer Tool options at the beginning of this section to help you use the tool.

How to Create White Spot Data in Photoshop

Introduction

This section explains how to prepare images that include white spot data with raster-based image editing applications such as Adobe Photoshop®. In order to print with white ink, you must have a media properly configured for the use of white spot data (see the section, How to Create a Media for White Ink). This media model will include at least one layer configured as a white spot color.

To add spot color data to your image in PhotoShop, you need to create one layer within the image as a new spot channel. It is possible to have more than one spot element in an image, but each element must be on the same spot channel, and therefore have the same opacity level, or else ProductionHouse will treat the saved document as a separation file. CMYK is the preferred image mode as the actions required for spot data creation are simpler than those for RGB.

Note:
You can use raster-based image editing applications other than Photoshop as long as it has the ability to create spot channels.

Purpose

When you have a raster-based image and need to have select areas of that image show up as white when the media is non-white or clear or translucent, you can prepare a spot channel for the white data in Photoshop.

When to do

The first step in the white ink workflow is to prepare your source image to use the white ink channel. The white ink data must be designed entirely on a separate channel (either as a spot channel layer or a custom spot color) to be recognized by the Onyx RIP. The name you assign to this spot channel layer or custom spot color must be "Spot 1" and is the most important part of preparing the file. This named channel allows RIP-Queue to determine that the data in the source image needs to be output to the spot white channel. In preparing your file, only you can define what you want to print with "white ink" as part of your design and assign the color as described in this document. Using your graphic application program, the white ink data can be simple or complex and can range from vector shapes and text to halftone bitmap images.

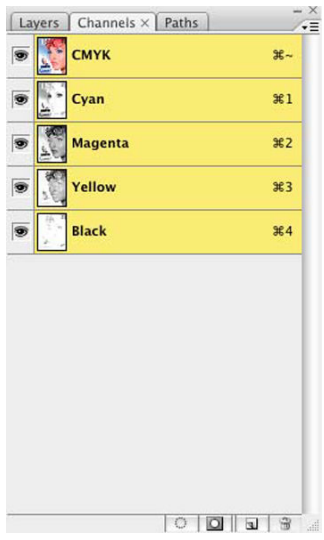
How to Prepare an Image in Photoshop

Use the following steps to create a new spot channel layer:

1. Open the desired file in PhotoShop (if the file is in RGB mode, then convert it to CMYK mode).
2. Use the desired selection tool (e.g. the Magic Wand) to select the area of the image you wish to print with white ink.

Note:
The image file used in this example is for illustration purposes only. For best results when working with text, we recommend that you use a vector-based program such as Adobe Illustrator.

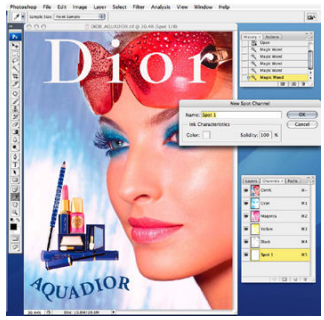
3. In PhotoShop, ensure that the Channels tab is visible (under the Window menu click Channels to view the panel).
4. Click the arrow on the Channels tab to display the Channels menu.
5. Select New Spot Channel from the Channels menu to open the Add Spot Channel dialog.



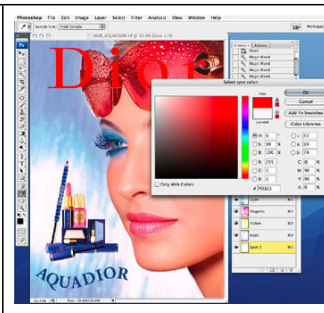
[102] Add Spot Channel

6. Within the Add Spot Channel dialog, enter the following information:

- **Name** – Enter the name “Spot 1”. This name is specifically reserved in RIP-Queue for this type of workflow, using any other name requires more steps to make spot information addressed by the Rip software.
  Note: For instructions on how to use a naming convention other than Spot 1, refer to the sub-section at the end of this section "Naming Your Spot Data".
- **Opacity** – Set the opacity to 10%
- Edit the channel **COLOR** by double-clicking on the swatch. Set the spot color in PhotoShop to a color similar to the spot ink in your printer. Since white can be hard to distinguish, this COLOR can be any value that will help you see the design better.



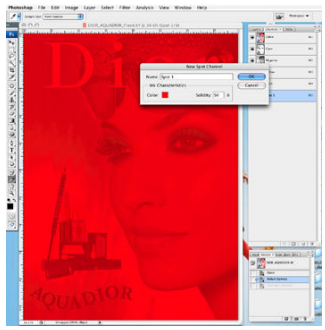
[104] Select Spot Color



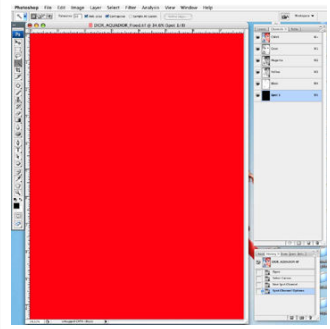
[105] Change Spot Color

7. Click OK to save your changes and close the Add Spot Channel dialog.
8. You can create a flood layer in the same way by selecting the entire workspace (Select All) and then add the spot channel as described above. The example below shows what your workspace may look like with a 50% and 100% flood fill. If you need to see your image for editing purposes, simply turn off the visibility of the Spot Channel.

Note:
When processing this file in ProductionHouse, media layers must be set up using a spot layer to represent this data, as program identifies this as a Spot layer, rather than a flood.

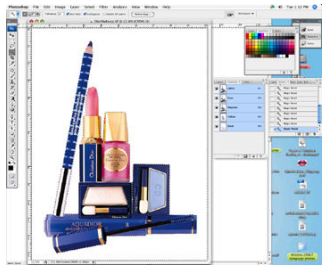


[106] Flood 50 PSD

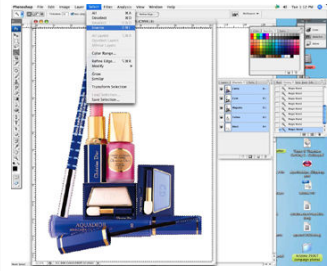


[107] Flood 100 PSD

9. In some cases, it may be easier to select the area in which you don't want any white ink data and then select the inverse.

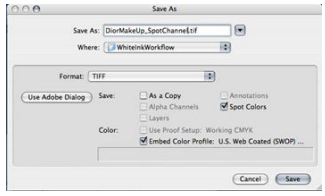


[108] Select



[109] Select Inverse

10. It is also possible to edit the spot channel much as you would any other data in a Photo-Shop document, making use of such tools as the Eraser.
11. Save your image as a either a TIFF or PSD format file (see the points below to determine the best format).



[110] Save with Spot Option

- If you intend to use this file in a vector-based program such as Illustrator, save it as a .PSD file in order for all channel information to be carried over. The white spot color is printed in the order it appears in the Channels palette, with the spot channel printing underneath CMYK data. However, when exported as a .PSD to Illustrator, this data will appear above the image data. This is the correct format protocol for Illustrator.
- Save as TIFF and ensure that the spot colors option is enabled if you plan to bring this image directly into ProductionHouse.
- It is also possible and sometimes preferable to print directly from PhotoShop to RipQueue. For instructions on how to do this, see document provided on the Onyx web site "Printing From a Mac", which also contains information on printing from Windows-based systems.

How to Create White Spot Data in Illustrator

Introduction

This section explains how to prepare images that include white spot data with vector-based image editing applications such as Adobe Illustrator®. In order to print with white ink, you must first have a media properly configured for the use of white spot data (*'How to Configure ProductionHouse for White Ink'* on page 156). This media model will include at least one layer configured as a white spot color.

To add spot color data to your image in Illustrator, you need to create one layer within the image as a new spot channel. It is possible to have more than one spot element in an image, but each element must be on the same spot channel, and therefore have the same opacity level, or else ProductionHouse will treat the saved document as a separation file. CMYK is the preferred mode as the actions required for spot data creation are simpler than those for RGB.

Note:
You can use vector-based image editing applications other than Illustrator as long as it has the Overprint feature and the ability to create a spot color.

When to do

The first step in the white ink workflow is to prepare your source image to use the white ink channel. The white ink data must be designed entirely on a separate channel (either as a spot channel layer or a custom spot color) to be recognized by the Onyx RIP. The name you assign to this spot channel layer or custom spot color must be "Spot 1" and is the most important part of preparing the file. This named channel allows RIP-Queue to determine that the data in the source image needs to be output to the spot channel, in this case the white ink channel.

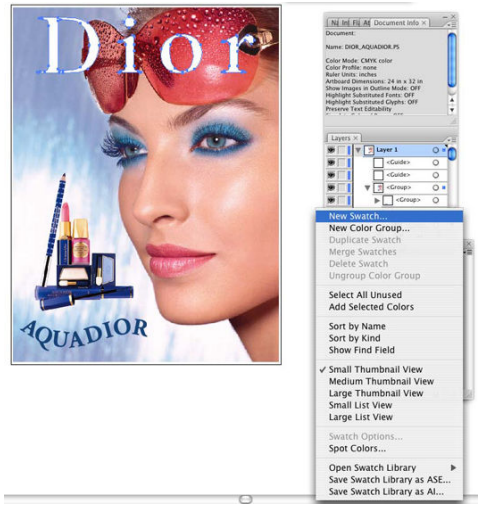
In preparing your file, only you can define what you want to print with "white ink" as part of your design and assign the color as described in this document. In Illustrator, the white ink data can be simple or complex and can range from vector shapes and text to placed bitmap images.

How to Prepare an Image in Adobe Illustrator

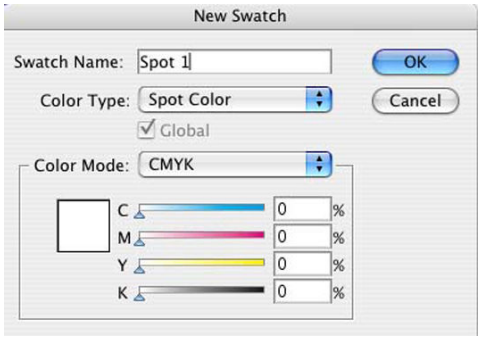
Use the following steps to configure an Adobe Illustrator file for use with white ink:

1. In Illustrator, ensure that the Swatches tab is visible (under the Window menu click Swatches to view).
2. Click the arrow on the Swatches tab to display the Swatches menu.
3. Select New Swatch from the Swatches menu to open the Add Swatch dialog.

4. Within the Add Swatch dialog, enter the following information:



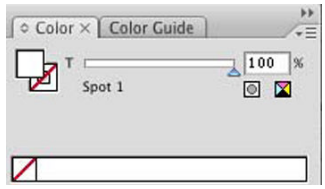
[111] New Swatch



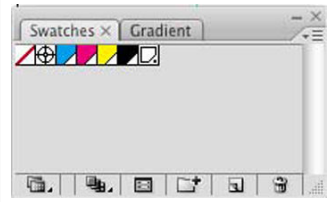
[112] New Swatch Name

- **Name** – Enter the name “Spot 1”.
  Note: For instructions on how to use a naming convention other than Spot 1, refer to the sub-section at the end of this section "Naming Your Spot Data".
- **Color Type** – Use the drop-down menu to select Spot Color.
- **Swatch Color** – Use the sliders to adjust the swatch color. It is best to choose a color similar to the spot ink in your printer. Since white can be hard to distinguish you can make this color any value that will help you see the design better.

5. Click OK to save your changes and close the Add Swatch dialog. You should now have a new Spot color in your swatch palette, which is indicated with a small dot on bottom right side of swatch.

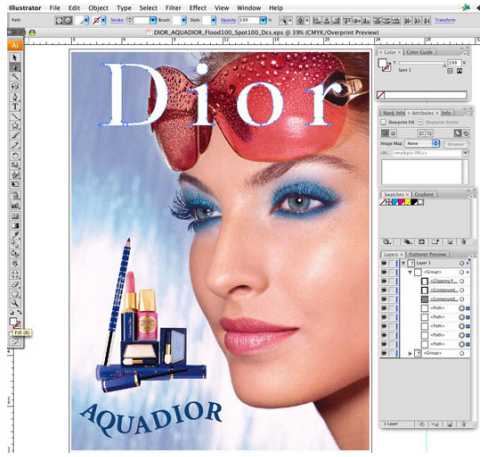


[113] Color Swatch



[114] Spot Swatch

6. Use the new swatch for any objects or fills which need to be printed with white ink. Clicking on new spot color swatch will make this the default fill color for this document. Select element you would like to be treated with Spot information and choose the fill swatch. See the example below.



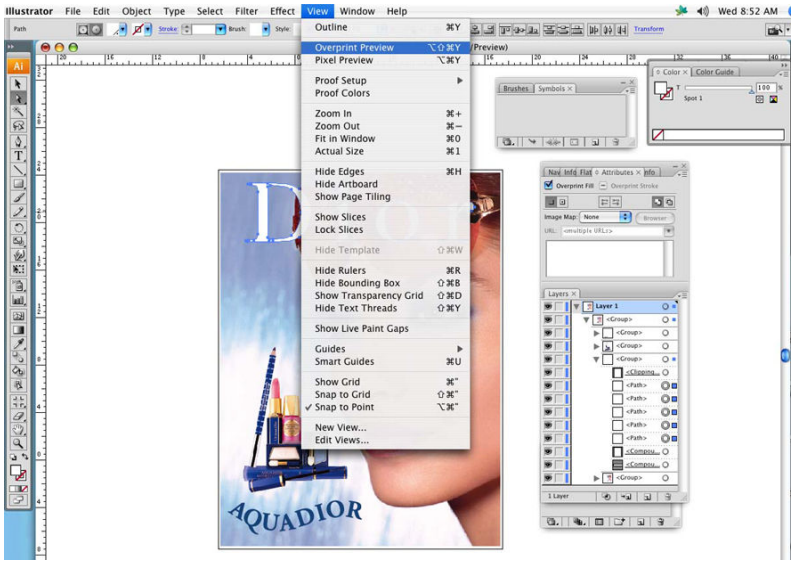
[115] Select Spot Fill

7. Once you've configured your source image with white ink as your new spot color, save your work.

How to Overprint Spot Data in Illustrator

By default, when you print opaque, overlapping colors, the top color knocks out (cuts a hole) in the area of colored image underneath. Overprinting prevents knockout and allows the colored image data to print over top of the other color being used, which in this case is white. You will want to overprint when the artwork needs to be printed over top of white, usually if the substrate material is non-white and therefore white is required to accurately render image data.

1. Select the white ink object or objects that you want to overprint and place these above the image data layer that you would like to print. Or if you want them on the same layer the white ink objects should be in front of the image data.

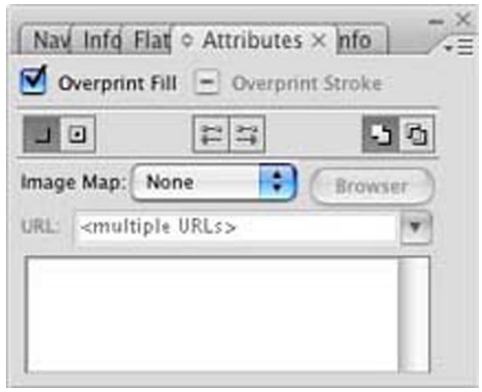


[116] Overprint Preview

Note:
After you set overprinting options, you should use the Overprint Preview mode (View > Overprint Preview) to see an approximation of how the overprinting colors will print by providing an "ink preview" that approximates how transparency and overprinting will appear in output.

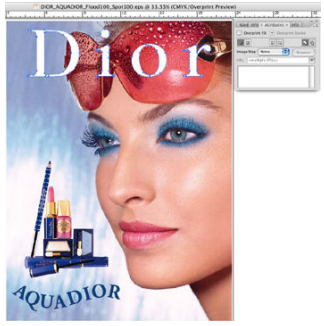
2. In the Attributes panel, select Overprint Fill, Overprint Stroke, or both.

Note:
While it is possible to set Overprint opacity levels less than 100%, ProductionHouse software only processes full opacity data. The opacity of regular knockout white data can be set as desired.

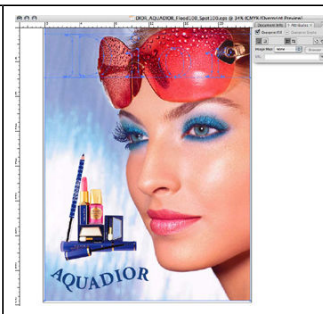


[117] Overprint Attributes

The images below shows white spot data with knockout and overprinting. In this case the spot data is meant to knockout in order to appear as white in the final document.



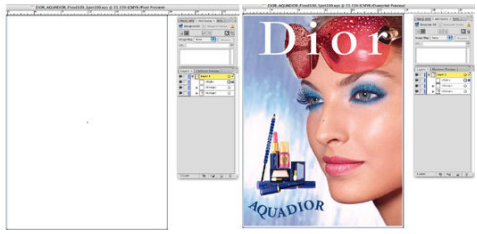
[118] Knockout



[119] Text Overprinting

White Flood Fill Layers
If a white flood layer were required in this file, it would be necessary to place flood data above the image data layer in order for the Rip to properly process the Spot data. In this case, you would need to select Overprinting, in order for image data not to be obliterated by white flood. To properly view the image ensure that Overprint Preview is selected. See images below for a representation of how this will appear.

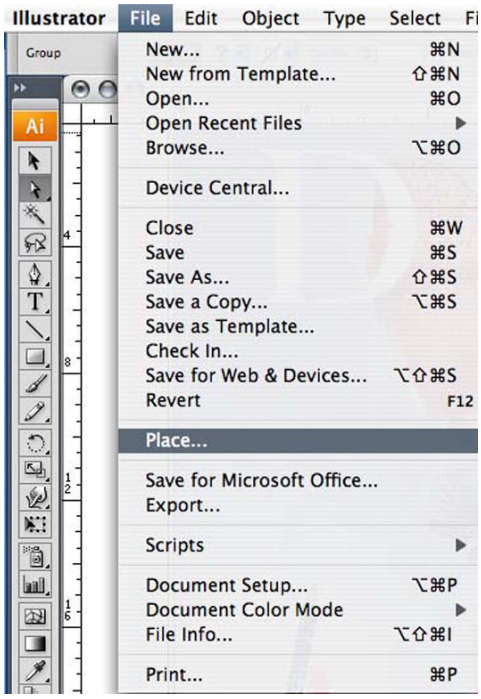
Note:
When processing this file in ProductionHouse, media layers must be set up with a spot layer to represent this data, as Illustrator identifies this as a Spot, rather than a flood layer.



[120] Pixel Preview Flood

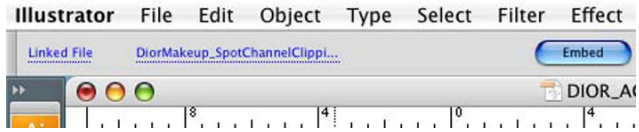
How to Place Raster Images in Illustrator

1. Begin by placing the desired file. We recommend using .PSD files.

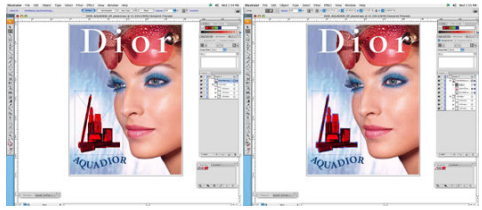


[121] Place File

2. Once the file has been brought into program, click the Embed button to place it in the Illustrator document. This step is necessary in order to make use of all channel data contained in the file.



[122] Embed File



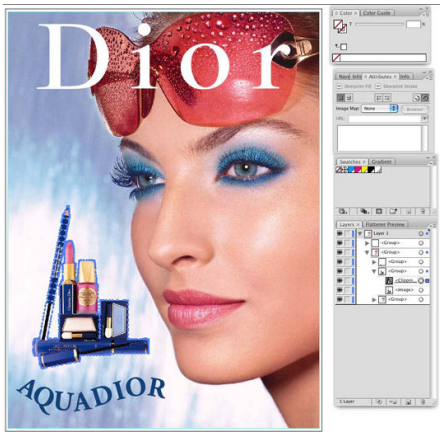
[123] Embed Placed

3. Note the information contained in the layers palette for file before and after embedding. Spot Channel data now resides in the layer above the image data, which is the necessary protocol in Illustrator.

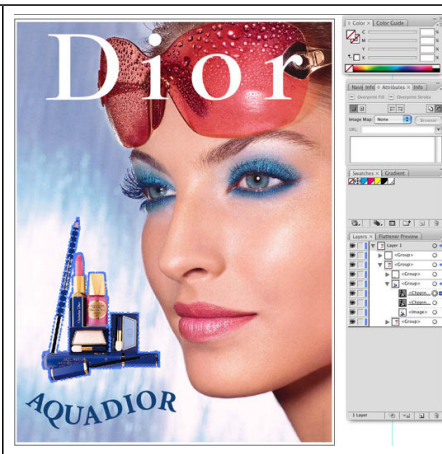
How to Create a Spot Channel Path in Illustrator

Conversely, you may place a raster file in your Illustrator document and create Spot data in Illustrator using the path creation tools. Create your path using the data as your guide and once the path is completed, fill this path with your Spot 1 color. This filled path should be placed above image in layers palette. In this particular case, the complexity of the selection path may dictate it's creation in PhotoShop, and Illustrator may be better used for simpler objects.

1. First, select your clipping path and make a copy of it.

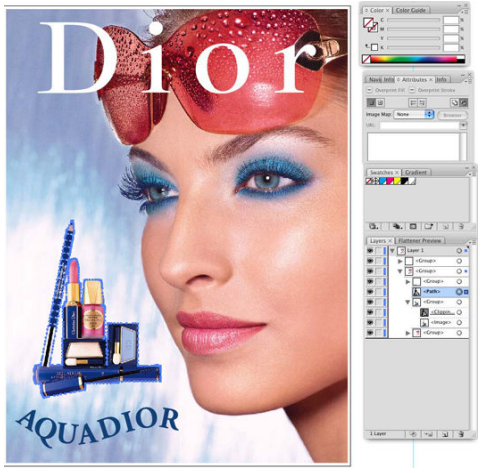


[124] Select Clipping



[125] Copied Path

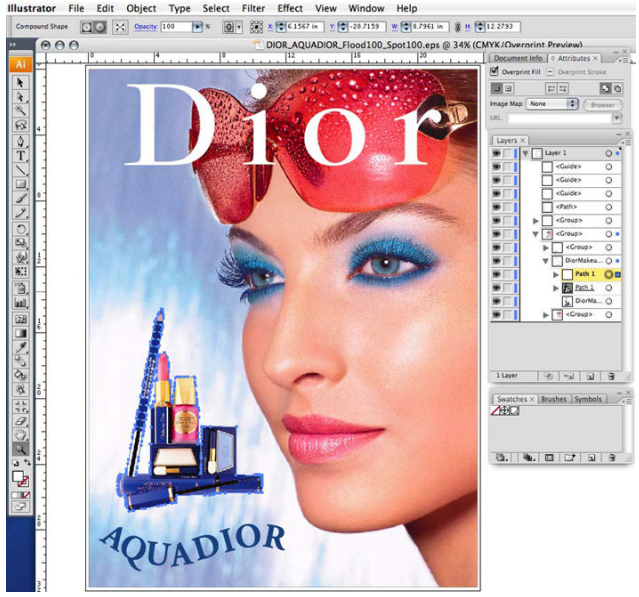
2. Then move the new layer outside of the group it is in to un-link it from the clipping path.



[126] Moved Channel

3. Once outside the group, make sure path is selected and fill it with your Spot 1 color.

4. Once that is done, replace path in the group above the image and clipping layers. Ensure that Overprint is turned on.



[127] Replace path in Group

5. Save the file.

Note:
In testing, we have found the .eps file format to be the best. However, Postscript and PDF files will work as well, but may require some additional setup. Make sure that when you save the file, "Preserve Overprints" is enabled.

It is also possible and sometimes preferable, to print directly from Illustrator to Rip-Queue. For instructions on how to do this, see the Onyx web site for a document called "Printing From a Mac" (it also contains generic information on printing from Windows-based systems).

6. Open the file in ProductionHouse.

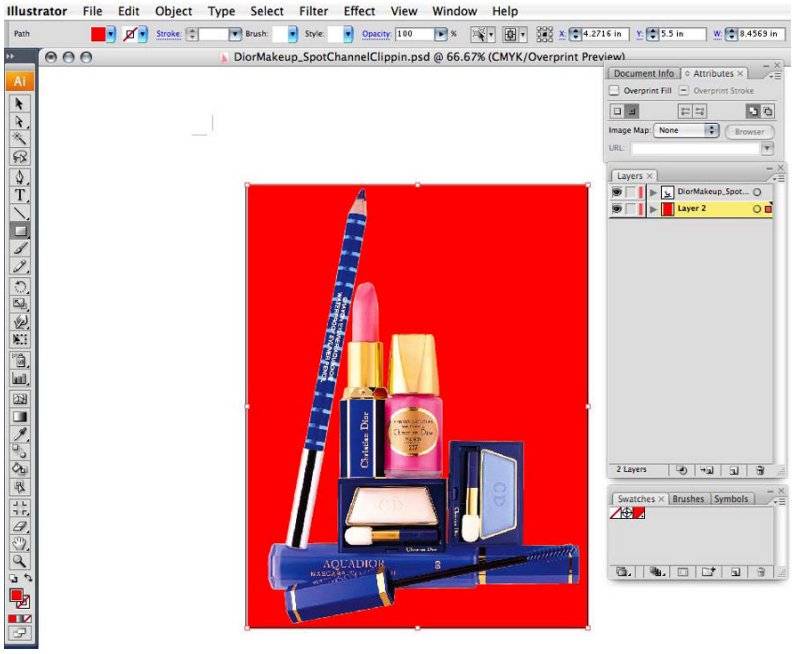
How to Set Up a File for Preflight's Spot Layer Tool

The Spot Layer Tool in Preflight can also make masks for data, and in some cases may be the preferred method of spot layer creation. To ensure that mask selection is made in Preflight without selecting those parts of your image that are of the same color, it is necessary to create a layer in Illustrator to serve as the mask.

1. Create a box around your image using the Rectangle Tool or other appropriately shaped box tool.
2. Make sure this new box is selected and select Fill swatch located at the bottom of the Illustrator toolbar. This will fill the box with color. By double clicking on this swatch a dialog box will open allowing for color changes. Ensure that the chosen color does not appear anywhere in your image. For this example we have used red (composed of 100% Cyan and 100% Yellow).
3. Place this rectangle behind your image data, either underneath or in a new layer below. It is not necessary to choose Overprint attributes for this layer.

Result

The prepared file should look similar to the below example.

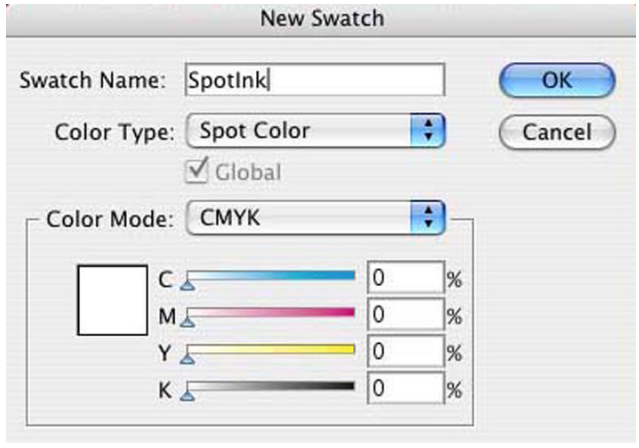

Illustrator File Edit Object Type Select Filter Effect View Window Help
DiorMakeup_SpotChannelClippin.psd @ 66.67% (CMYK/Overprint Preview)
Christian Dior
AQUADIOR

[128] Red Mask

How to Name Your Spot Data

In order for ProductionHouse to correctly distinguish and address Spot data, naming conventions for this data must be adhered to both in the image editing creation stage and the Rip. While using the default name "Spot 1", is the simplest route requiring the fewest number of steps, there may be instances when using something other than this is desirable. For instance, when data is created by one individual and printed by another, naming spot data may make desired output results more clear. As well, if English is not your native language, use a name that is more meaningful in your language to be more effective. Please do not use the name "White" as this color flags ProductionHouse to be treated in a particular manner not desired for this workflow.

1. When you create a new Spot Swatch in Illustrator, edit the name and replace it with your preferred name.

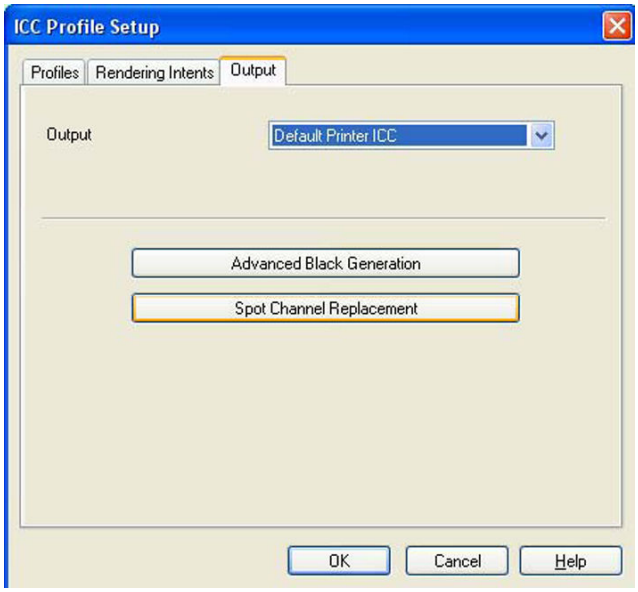


[129] Spot Ink Swatch

2. Edit the media to be used for this data in Media Manager, replacing the default name Spot 1, with your newly created name.

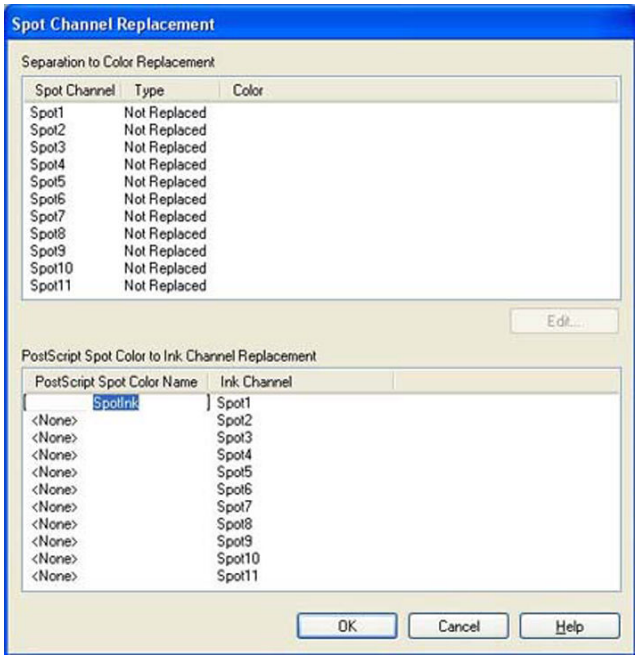
[130] Change Name

3. Open file in Preflight and access the Color Management/Edit Profiles tab. Click on Spot Channel Replacement box.



[131] Spot Channel Replacement

4. Enter the new name in PostScript Spot Color Name in Spot 1 space.



5. Click OK to save your settings.

How to Print With White Ink

How to Use Media Models

Introduction

You must use a media model that is configured for white ink before you can generate white ink output from ProductionHouse. The media is actually part of a media model description (sometimes incorrectly referred to as a profile) that contains other specific information such as ink restrictions, linearization, ink limits and ICC profiles. The creation of media models and profiling is a complex procedure that is partly explained elsewhere in this document. If you are not comfortable with the procedure, you can use the pre-defined media models posted on the DGS web site. These media models can be found at www.dgs.oce.com/ in the Customer Support area. Note that the names of these models contain a specific printer model, although they will work for all printers with the white ink option. The media models provide a good start point for the white ink workflow.

Generally we advise that you create a new media model or edit an existing one with your on-site printer and the specific materials you use for print jobs. However, for your convenience, we have provided a set of default White Ink Workflow media models that cover a few different common print scenarios and media types. This section includes descriptions of each media model and provides an illustration of how print jobs generated with them in ProductionHouse will look in your printer's software interface. There is also some explanation of how they are to be used. If you edit the models you can save them with a different name that reflects your changes.

Note:
The term "media" can be confusing as it really has two meanings in the context of your ONYX workflow. In general use, it refers to a physical material that you can print on. ONYX uses the term media to refer to how a particular material is used and included within a media definition. Their use of the term media refers to the model that you define and then use when you open a print job. Océ uses the term media model to make the definition distinct from the physical media. Another point of confusion is that media models are sometimes called Profiles. In fact, ICC Profiles are only a part of the media model that is associated with color management and are not the whole media model.

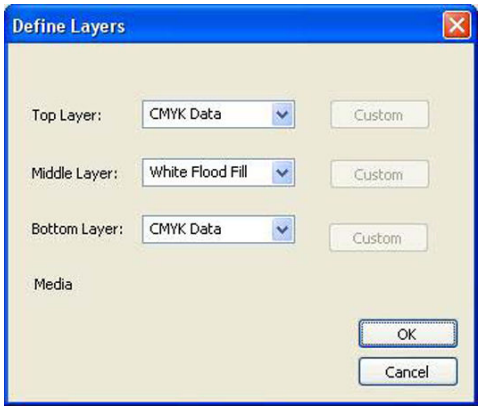
How to Use a Media Model

ONYX RIP Queue, ProductionHouse, and PosterShop, all use a media format known as an ONYX Media Library (.oml). To install an .oml, select your printer and open the ONYX Media Manager. In Media Manager, select Media> Import, and browse to the media. Once imported, the media will be available to any print jobs that you open.

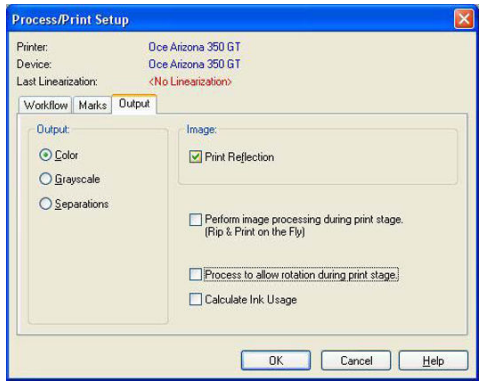
Note:
ProductionHouse also allows you to create Media Groups that contain various Media Models. You can create a group that contains media models with different settings for the same physical material. Or you can group together various media models that have something in common, for example the five media described in this section belong to the group "WhiteInkUsageMedias".

Day/Night on Clear Substrate

Download file: Oce_Arizona_350_GT_WhiteInk_DayNight.OML
This media model was built for the creation of 3-layer Day/Night Application prints on clear materials. This method of printing is used to provide pleasing output for images when viewed under front or back lighting conditions. Day/Night output is obtained by first laying down a CMYK image layer, followed by a white layer (in this media the white is a flood fill layer, but a properly setup Spot layer may provide the same desired effect), and finished with another CMYK image layer. Since a Flood Fill layer has been defined, no additional file preparation is required to activate white printing.
If you print second surface (print on the back side of clear media) it may be necessary to choose Print Reflection in Print Setup in order for the images to read correctly when viewed from the front side of the media.

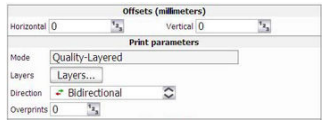


[133] Day/Night Define Layers



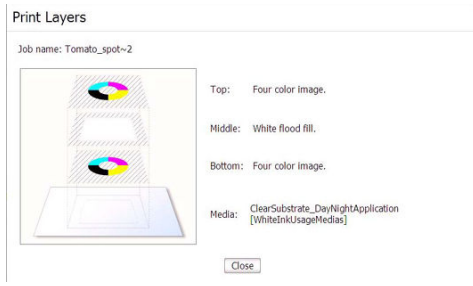
[134] Day/Night Print Reflection

When you process a print job in ProductionHouse with this media model as provided, the job information displayed in the printer's Print Job Control module will appear as follows:



[135] Day/Night Parameters

Select the Layers button in the Job Control module to activate a graphical representation of the Print Layers that allows you to verify the layer order.



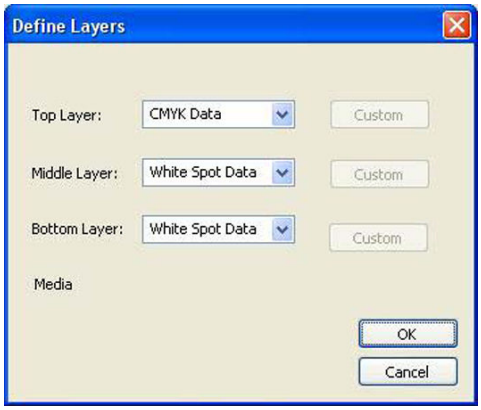
[136] Day/Night Layers

Two White Ink Layers on Black Substrate

Download file: Oce_Arizona_350_GT_WhiteInk_BlackSubstrate.OML

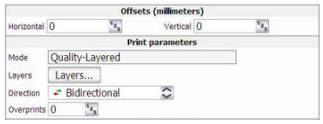
This media model was built using a media with a black print surface. In this instance, black Polystyrene was used. Due to the darkness of the media it is possible that the media color will show through. Therefore this media model makes use of two white ink layers to achieve opaque white coverage, followed by a CMYK image layer, and the result is a 3-layer media model. In this media model, the white ink layers are designated as Spot layers, so spot data must be either created in an image-editing program prior to opening

in Production House, or it can be set up with Onyx Preflight Spot Layer Tool. To re-purpose the model for use with flood fill, access the drop-down menu and change from Spot to Flood Data. If a Flood Fill layer has been defined, no additional file preparation is required to activate white printing.



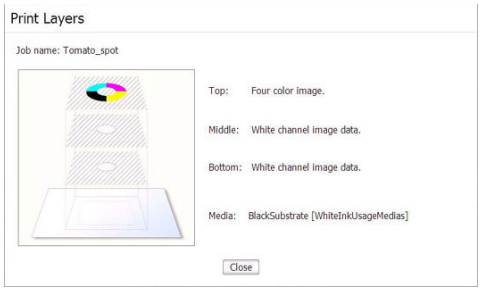
[137] Define Layers

When you process a print job in ProductionHouse with this media model as provided, the job information displayed in the Arizona 350 GT Print Job Control module will appear as follows:



[138] Parameters

Select the Layers button in the Job Control module to activate a graphical representation of the Print Layers that allows you to verify the layer order.

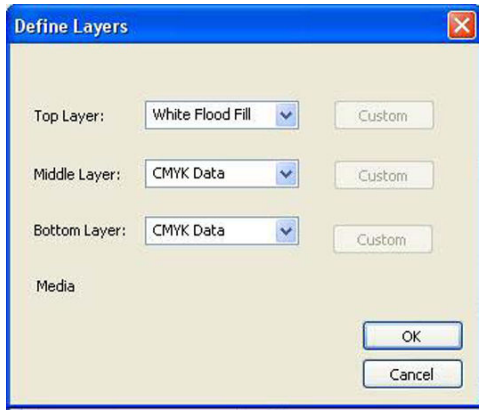


[139] Print Layers

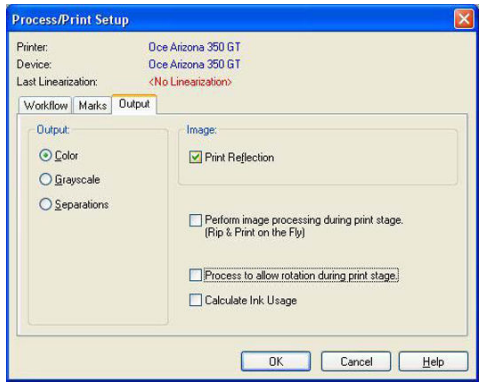
Backlit Application on Clear Substrate

Download file: Oce_Arizona_350_GT_WhiteInk_ClearBacklit.OML

This media model is intended for use when you print data for backlit viewing on clear materials. Clear materials do not provide any light diffusion, which is often desired for more pleasing presentation on non-diffused light sources. Therefore, this media is built using 2 layers of CMYK data for color density followed by a layer of white flood data for diffusion. Since a Flood Fill layer has been defined, no additional file prep is required to activate white printing. Because this media is built for second surface backlit viewing, it will be necessary to set Print Reflection in Print Setup in order to have the image correctly oriented when it is viewed.

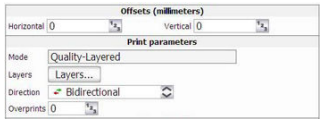


[140] Define Layers



[141] Print Reflection

If you want to re-use this media model for images to be viewed from the front, or print surface, simply re-order the layers with flood fill at the bottom and turn off Print Reflection.
When you process a print job in ProductionHouse with this media model as provided, the job information displayed in the Arizona 350 GT Print Job Control module will appear as follows:



[142] Parameters

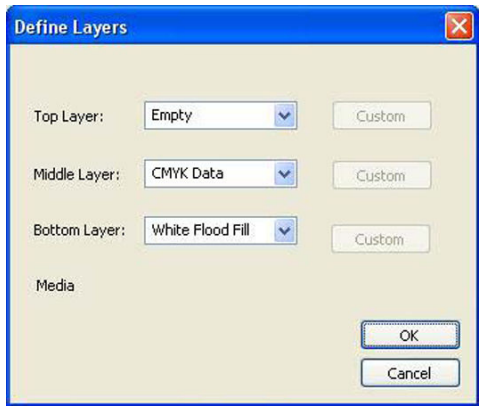
Select the Layers button in the Job Control module to activate a graphical representation of the Print Layers that allows you to verify the layer order.

[143] Layers

One White Layer on Mid-tone Grey Surface

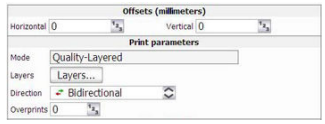
Download file: Oce_Arizona_350_GT_MidtoneSubstrate.OML

This media model is intended for a mid-tone grey print surface. Due to the relative lightness of the media it is not necessary to place two layers of white ink to provide opaque white coverage before your CMYK image data. As two layers of white are not necessary, this media model contains only one white layer followed by the CMYK color data. Since a Flood Fill layer has been defined, no additional file prep is required to activate white printing. To re-purpose for Spot usage, just access the drop down menu and change from Flood Fill to Spot Data and ensure that the file has been properly built for this type of output or appropriately edited with the Spot Layer Tool. A 2-layer configuration will result in faster print speeds than those configured for 3 layers.



[144] Define Layers

When you process a print job in ProductionHouse with this media model as provided, the job information displayed in the Arizona 350 GT Print Job Control module will appear as follows:



[145] Parameters

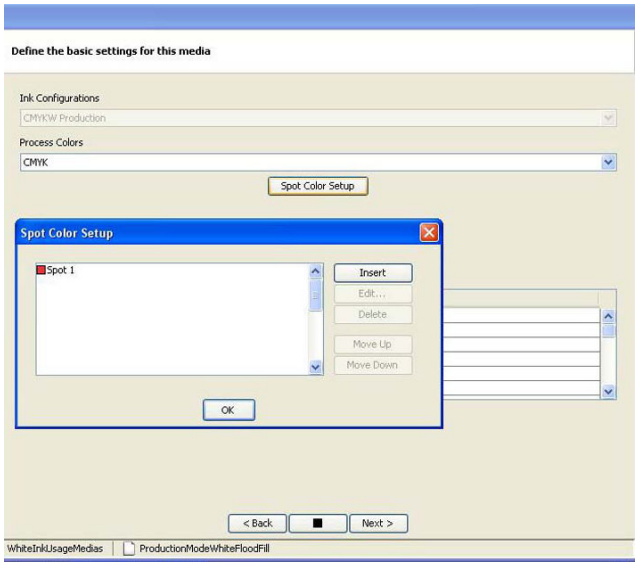
Select the Layers button in the Job Control module to activate a graphical representation of the Print Layers that allows you to verify the layer order.

[146] Layers

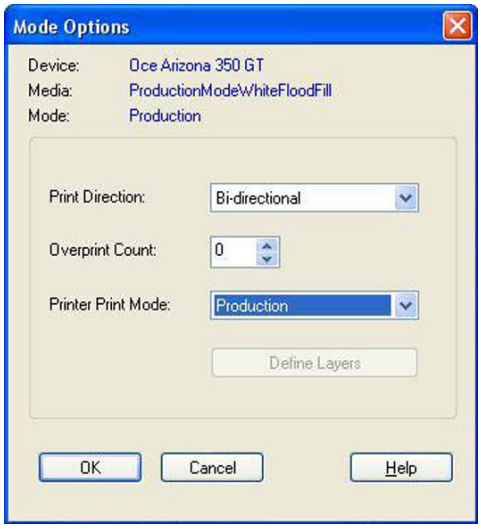
White Flood Fill in Production Mode

Download file: Oce_Arizona_350_GT_WhiteInk_ProductionFlood.OML
This is the only media within the provided White Ink Workflow Media Model set that is not in Quality-Layered mode. This media is to be used as either a pre-print or post-print flood fill when the speed of application is foremost and fully opaque white coverage is not necessary. This mode is not intended for 4 color CMYK plus white print jobs; it is simply a means to lay down white ink. First you must create a file that is sized at the final output dimensions required. Then fill it with either Spot 1 data, or leave it as a single

color and then subsequently address it with white Spot data within Preflight's Spot Layer Tool.

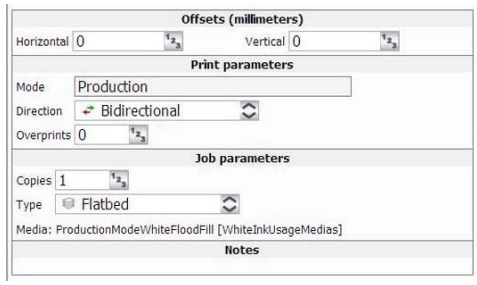


[147] Setup Spot Color



[148] Mode Options

When you process a print job in ProductionHouse with this media model as provided, the job information displayed in the Print Job Control screen will appear as follows:



[149] Parameters

How to Create a Media for White Ink Print Jobs

Introduction

You must have a media model that is configured for white ink with the Quality-Layered print mode selected before you can successfully generate white ink output from ProductionHouse. This section will explain how to create a new media model with all of the necessary configurations. You can also edit an existing media model to change some of the settings and then save it with a new name.

Note:
ONYX ProductionHouse uses the term "media" to refer to what is called a "media model" in this manual.

The creation of media models and profiling is a complex procedure that is only partly explained here. If you are not comfortable with the procedure, you can use the pre-defined media models posted on the DGS web site in the Customer Support area at www.dgs.oce.com/. These media models provide a good start point for the white ink workflow. However, we recommend that you create your own new ones to ensure optimal success with your particular white ink workflow.
If you want to skip the media creation process, you can go directly to the "How to Print with White Ink" section for instructions on how to use the media models supplied on the web site. However, you will be limited by the particular white ink workflow and the media that those models support. Also, unless you simply want to use a white flood fill, you will need images that are prepared with white spot data (see the nearlier section, How to Prepare Images for White Ink).

Note:
Most of the media settings can be overridden in Preflight or RIP-Queue, if desired.

Purpose

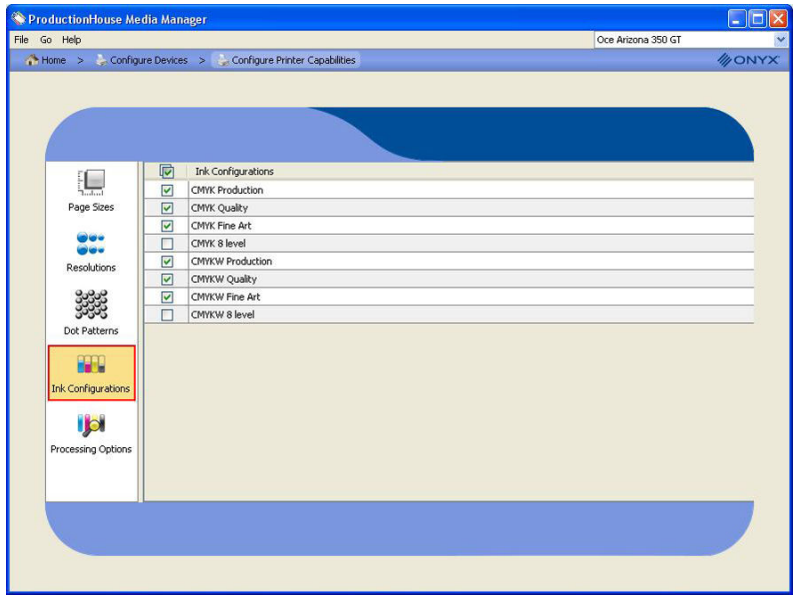
The media you create for white ink use is actually a description of how you will use that media in the white ink workflow. It includes a white spot color channel and a description of the layers in the image and the order those layers will print. The media you create is actually part of a media model (sometimes referred to as a profile) that contains other specific information such as ink restrictions, linearization, ink limits and ICC profiles. This section will look briefly at how to create and use a media model, but the main focus is on how to create the media. The media is essential to white ink workflow, and the rest of the media model creation simply ensures optimal image quality.

Note:
The term "media" can be confusing as it really has two meanings in the context of your Onyx workflow. In general use it refers to a physical material that you can print on. ProductionHouse uses the term media to refer to the definition of how a particular material is used and included within a media model that you define and then use when you open a print job.

Before you begin

Before you create a new media you must set up your printer to enable white ink configurations in Onyx Media Manager.

1. In the RIP-Queue, highlight your printer and click > Media Manager.
2. Click > Configure Devices > Configure Printer Capabilities and enable the white ink configurations (CMYKW) from the ink configuration menu.



[150] Configure Printer

Your printer is now enabled with an ink configuration that supports white ink. You only have to set this up one time unless you add a new printer to ProductionHouse.

Note:
The next section will show you how to create a media model that is configured for white ink printing.

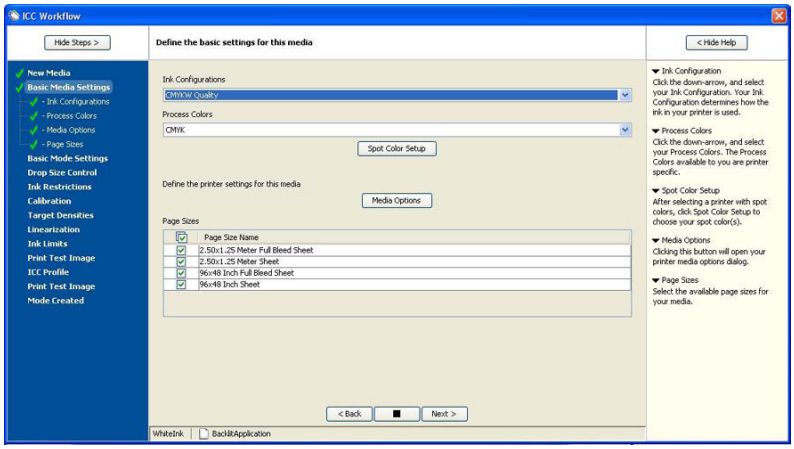
3. Return to the Media Manager Home page.

How to Create a Media Model for White Ink

1. From the Home page in Media Manager click > Create Profiles > Create Media
2. Select the Media Group (or create a new one) and enter a Media Name, then click > Next.

Note:
Media Group is a convenient way to organize media with similar characteristics together. Provide a name that will remind you of those common elements. Media Groups contain various Media Models. You could create a group that contained media models with different setting for the same physical material. Or you can group together various media models that have something in common, for example the media models provided on the Customer support web page belong to the group "WhiteInkUsageMedias".

3. Select the CMYKW Quality Ink Configuration from the drop-down menu.

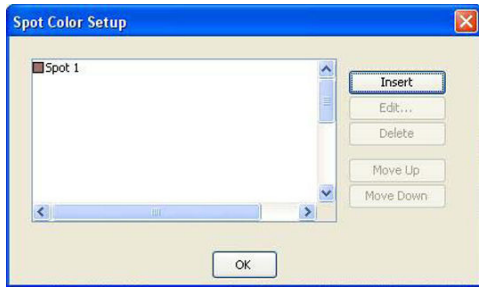


[151] Set Quality Ink Configuration

Note:
In order to make use of the multi-layered print mode, the Quality-Layered Mode must be used. It is also possible to generate white flood data with limited functionality in one layer using the Production, Quality and Fine-Art CMYKW modes. The CMYKW print mode should not be used with files containing both white and CMYK data in a single layer print mode, as the results will be of poor image quality.

4. Select CMYK for the Process Colors option.
5. Click > Spot Color Setup.

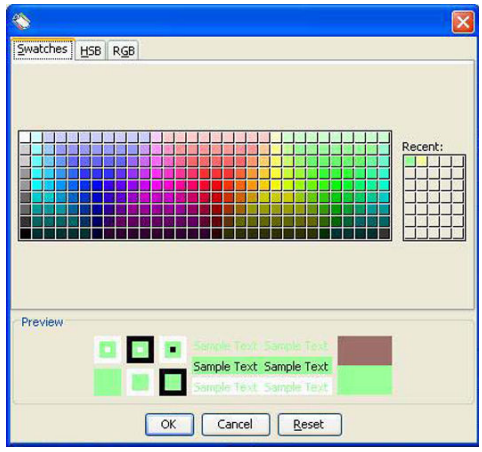
6. Click > Insert to add “Spot 1” to the Spot Color Setup dialog.



[152] Insert Spot1

7. If you want to change the preview color of your spot layer, highlight “Spot 1” and click > Edit .

Note:
If you change the name of your Spot color to anything other than Spot 1, the data file you prepare for this media must also make use of the **exact same spot color name**. Also, this name must be set up in Color Management/Edit Profiles/Spot Channel Replacement. Do not use the name “White” as that name will prompt ProductionHouse to treat it in a particular manner not desired for the white ink workflow.
The preview color chosen here will be used as an indication of Spot color layer usage in the Preflight preview. We suggest that you select a color that is easily recognized as non-image data, such as a fluorescent or pastel color. Also, if you use the same color for all your media configurations it will provide quicker identification of the spot data in Preflight.



[153] Spot Preview Color

Note:
The printer only has one available white ink spot channel, so do not insert a second spot or the Rip will treat files using this configuration as separations.

8. Click > OK.
   At this point, the media you have created can be used in Preflight to view and Rip files for white ink output. You will be able to see where Spot white has been used in prepared files and work with Preflight's Spot Layer Tool. However, media at this stage is without those components of a media model that determine the optimal ink usage, such as ink restrictions and linearizations. Not utilizing these components will result in inaccurate color output and without an ICC profile your usable file color space is limited to CMYK. As well, not restricting your ink levels correctly may result in an increase in ink droplet misting issues.

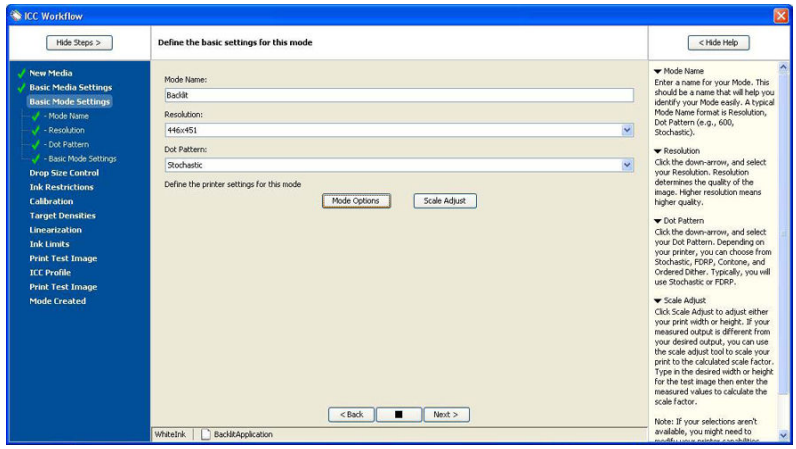
Note:
Most of the steps for creating a media with a white spot are similar to the regular workflow. Please do not attempt these steps unless you have experience creating media profiles. The profiling steps and color theory are not explained in detail and are not covered in this document.

9. For the best quality output results, we recommend that you continue building your media model as described below.

How to Configure Layers and Print Order

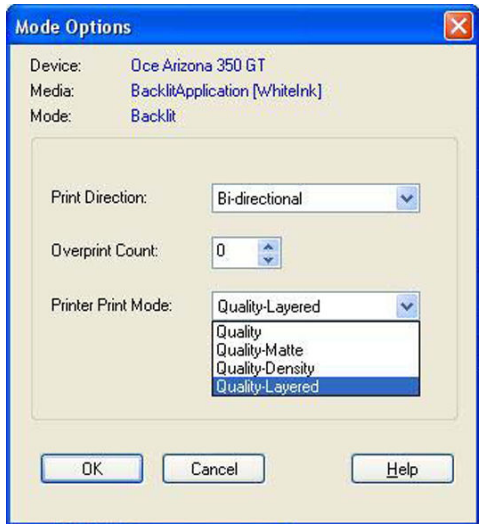
If order to make use of the multi-layered Quality-Layered print mode in your printer, you must configure your layers and also set what inks will print on each of the layers.

1. In Basic Mode Settings, click on Mode Options.


ICC Workflow
Hide Steps >
Define the basic settings for this mode
< Hide Help
New Media
Basic Media Settings
Basic Mode Settings
- Mode Name
- Resolution
- Dot Pattern
- Basic Mode Settings
Drop Size Control
Ink Restrictions
Calibration
Target Densities
Linearization
Ink Limits
Print Test Image
ICC Profile
Print Test Image
Mode Created
Mode Name:
Backlit
Resolution:
446x451
Dot Pattern:
Stochastic
Define the printer settings for this mode
Mode Options
Scale Adjust
< Back
Next >
WhiteInk
BacklitApplication
Mode Name
Enter a name for your Mode. This should be a name that will help you identify your Mode easily. A typical Mode Name format is Resolution, Dot Pattern (e.g., 600, Stochastic).
Resolution
Click the down-arrow, and select your Resolution. Resolution determines the quality of the image. Higher resolution means higher quality.
Dot Pattern
Click the down-arrow, and select your Dot Pattern. Depending on your printer, you can choose from Stochastic, FDRP, Contone, and Ordered Dither. Typically, you will use Stochastic or FDRP.
Scale Adjust
Click Scale Adjust to adjust either your print width or height. If your measured output is different from your desired output, you can use the scale adjust tool to scale your print to the calculated scale factor. Type in the desired width or height for the test image then enter the measured values to calculate the scale factor.
Note: If your selections aren't available, you might need to

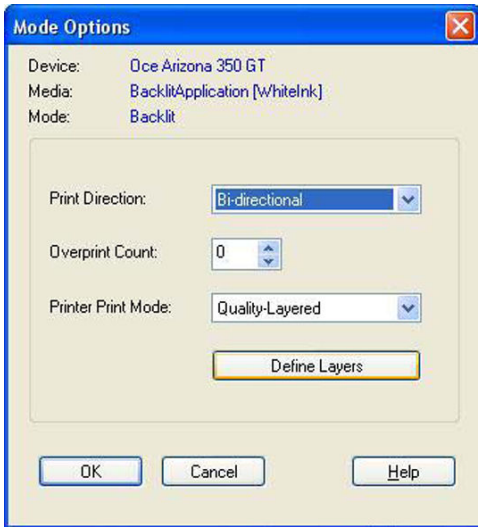
[154] Mode Options

2. In the Mode Options window, select the Quality-Layered Print Mode. Click OK to save these settings and close the window.



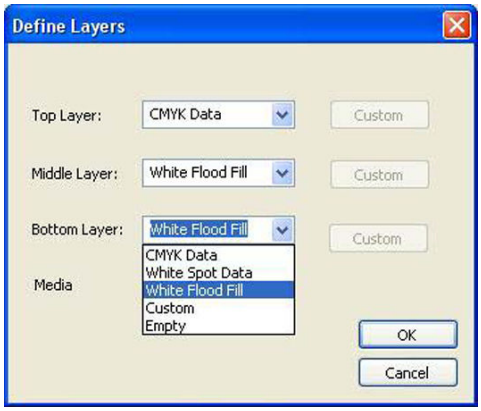
[155] Define Layers

3. Once you select a mode the Define Layers button appears under the Printer Print Mode.



[156] Define Layers

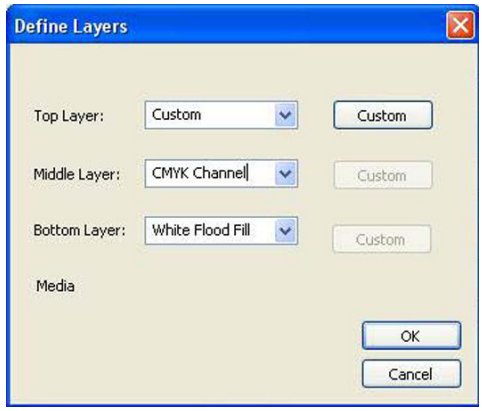
4. Click on Define Layers to open this dialog and the following window should appear.



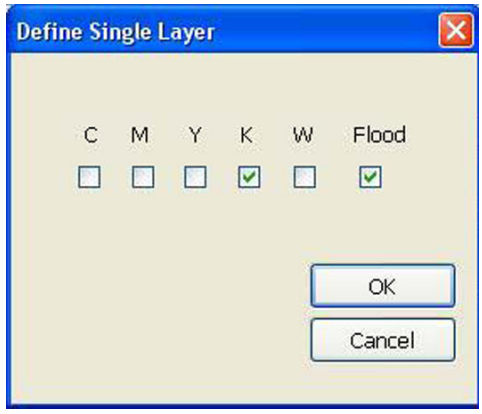
[157] Define Layers

5. This is where you can set up how you want the ink to behave in each layer. It is not necessary to use all 3 available layers; it is also possible to build a media using only one or two layers. The ink usage options for CMYK, White Spot and White Flood Fill data are set to default values. If you want to edit these layer options, choose Custom from the

drop down menu and click on the Custom tab to the right of this. This action will bring up the Define Single Layer window.



[158] Define



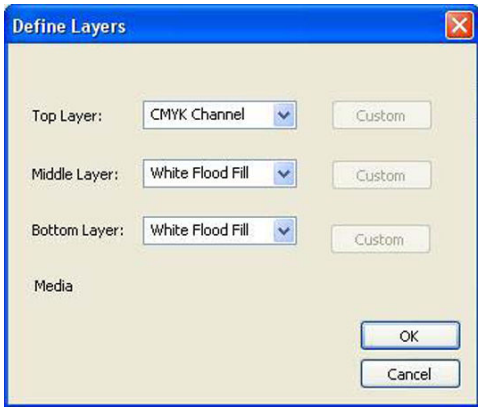
[159] Define Single Layer

Note:
The data used in the white spot layer needs to comes from the spot data found in the image you have created in an image editing program such as Adobe Illustrator. If you want to auto-generate spot data from your image, use the Spot Layer Tool in Preflight to create the data for the white layers. To generate white flood (or any color flood) it is not necessary to set up files in any special way prior to opening in Production House, simply choose a media configuration that has Flood Fill enabled.

Configure White Flood Layers

If you want to create linearizations and ICC profiles with a white underlay, we recommend you configure one or more flood fill white layers for white based on the desired opacity for your application and one layer for CMYK data.

1. Configure your layers for the white layer to print closest to the media.



[160] Configure Flood Layers

2. This configuration allows you to print your linearization and ICC target swatches directly from Media Manager with a white underlay.

Note:
You can always go back and change the layer configurations after you have completed the processes that requires such a configuration. Keep in mind though that if you use one or two layers of white it will affect output color rendering and overall density.

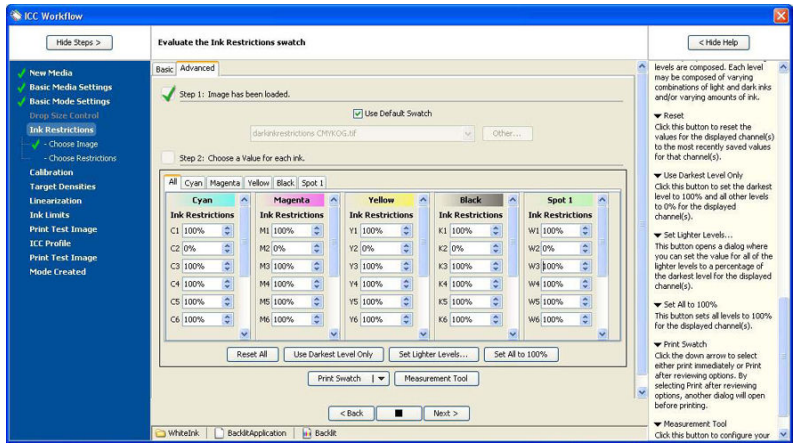
3. For the best color fidelity, create separate media models for one or two layers of white usage.

Set Ink Restrictions

When determining ink restrictions for your spot channel, use the following steps:

1. Print and review the default swatch from the Basic tab.
2. Set up Advanced Ink Restrictions as shown in the example as a starting point. For best results, we recommend leaving all Level 2 percentages at zero. Choose a value where the patch does not bleed or show any other objectionable artifacts and enter that percentage

in the Advanced tab in the Spot field. In testing, we have found this value is usually acceptable if left at 100%.



[161] Set Ink Restrictions

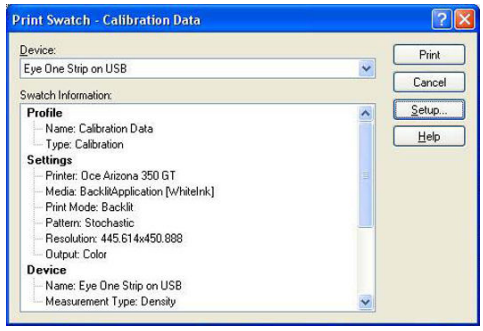
3. If you are printing on clear materials make sure the opacity is acceptable as well as exhibiting no over-inking artifacts. You may find that you will need to configure multiple layers as described earlier to get the coverage you desire. Determine the ink restriction values for your color channels as usual using either the density or chroma method. Depending on the swatch you reprint to verify your results, the spot channel may not be printed.
4. Click > Next to continue.

Calibration/Linearization

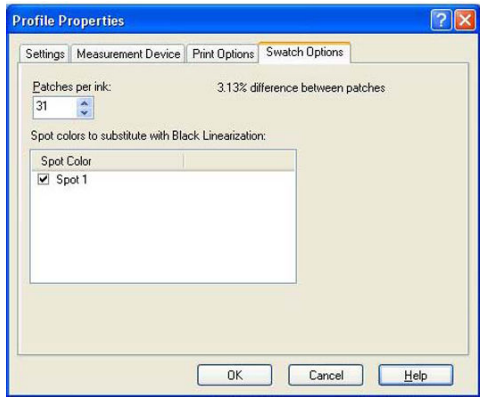
To print the calibration swatch:

1. Click > Print Swatch and select a manual hand-held strip device or spot color sampling device and click > Print.

Note:
If you use a strip device such as the Gretag-MacBeth EyeOne, you may get invalid readings for the white data. To ensure that you get usable spot data points for each measurement, you will need to use the data from the black channel. To do this, click on Setup in the Print Swatch Dialog. In the Swatch Options tab, click select Spot 1 to substitute with the black linearization information.



[162] Print Swatch



[163] Substitute White for Black

2. Once the swatch is dry, click > Read Swatch and Read Swatch again to open the calibration data table.
3. Follow the Strip letter and Patch number. If you have substituted the Black Channel for your white ink there are no additional steps necessary.
4. Click > OK to accept readings and click > Next to continue.
5. Click > Build Linearization as usual. Note your Spot Channel curve is now represented bearing the same curve as black. Continue on to the Ink Limits step.

Set Ink Limits

To print the Ink Limits swatch:

1. Click > Print Swatch and determine Ink Limits as usual. Look for bleed in the columns and choose a value where you can eliminate waste ink.
2. Click> Read Swatch and enter in the values in the recommended Advanced tab.
3. Click > Next to continue on to the ICC step.

ICC

Spot colors are NOT used in ICC processing so continue as usual if you want to create a profile. To print the ICC swatch:

1. Click > Print Swatch and select your color sampling device.
2. Click > Setup > Options if you want to choose a larger number of swatches for profile accuracy, otherwise click > Print.
3. Click > Read Swatch and read in the ICC data.
4. Click > Options to modify the settings, or click > Build to use the default build options.
5. Create a test Print and click > Next to continue.
6. Click > Finish.

Result

This completes the media profiling workflow and you can now use this media in ONYX ProductionHouse.

How to Use the Media You Created

Now that you have a media model with white ink, you may wish to edit and configure this media with different layer options. Keep in mind that using one or two layers of white will affect the output color rendering and overall density. It is suggested that separate media models be created for one or two layer white ink usage. To make a copy and edit a media:

1. Within Media Manager > View Media Library.
2. Select the media and click > Copy and rename the media.
3. Highlight the media and click > Edit.
   Conversely, to keep the size of the OMLs down you may want to select and copy the print mode only rather than the entire media folder. This method requires that you bring jobs into Preflight to change the print modes rather than simply choosing a different

media from Rip-Queue. Remember that changes to the layer order and ink color usage may also be made on a per job basis from Rip-Queue. Right click on the desired file then choose Edit/Printer Settings. A dialog box opens allowing you to re-define the layers here.

How to Create and Use Quick Sets

Introduction

This section describes how to create and use Quick Sets. A Quick Set contains a set of printer configuration parameters that are defined and then saved for use with print jobs that will benefit from that particular set of parameters.

When you edit and/or create a Quick Set you can customize it to meet your print setup needs. Quick Sets can dramatically increase your productivity since they can be designed to offer a predefined set of configurations to support the white ink workflow. Once you create a Quick Set you can copy and then edit it to create as many variations as required to support various workflow options.

Use Quick Sets to manage your jobs more efficiently. A Quick Set is a RIP-Queue tool that automatically applies your selected set of settings when you choose it for your print job. Quick Sets are convenient when working with white ink because they can be used to predefine the ink layer configurations and optionally can reference Filters that contain pre-defined Color Correction and Spot Layer Tool settings (think of the Filter as a group of particular Color Management settings that can be contained within a more general group of settings - the Quick Set). Once you create and apply Quick Sets to a print job, the job will have the appropriate settings automatically selected.

Quick Set Options Specific to White Ink Workflow

In the Quick Set dialog, you can click on any of the tabs to modify any of the Advanced Options. The options shown here are the ones that will provide the most benefit to white ink workflow productivity:

Quick Set Name

The Quick Set Name is the name that will appear in the RIP-Queue menu. If you edit the default Quick Set, you cannot change the Quick Set Name. Use identifying features in your Quick Set Names to help you pick the appropriate Quick Set later on. For example, if your Quick Set indicates 2 layers of white flood, including the term 2 Layer Flood in the name will help you correctly identify and use that Quick Set.

Note:
We recommend a standard Quick Set Naming Convention that helps to identify the print order of your layers in the following order; "Top Layer Definition"; "Middle Layer Definition"; and "Bottom Layer Definition". You can use shortcut terms like: 4c wf ws, or 4c ws 4c. You can also use longer terms like 4color whitefill whitespot, or wspot wfill CMYK to remind you of the order.

Media

Media includes the following settings:

- **Get Media and Page Size from Printer**
  Unselect "Get Media and Page Size From Printer" so that you can select the media, print mode, and layer definitions to be associated with the Quick Set. First select a media name that contains a Quality Layered Printer Print Mode, then verify/select a Print Mode that contains a Quality Layered Print Mode " Media Options"
- **Media Configuration Name**
  Choose the Media Configuration Name that best matches the media or ink configuration of the media you will use.
- **Media Options**
  Allows you to verify the Printer Print Mode is Quality Layered. From here you can select "Define Layers" to specify the layer definitions.
- **Media Name**
  Select the name of the Media that you want to use for this Quick Set. See section xxx for information on how to create a media.
- **Print Mode**
  Always select Quality-Layered Printer Print Mode if you want to use the layered printing capabilities of theOcé Arizona 550 XT.

Advanced Quick Set Options
To access the Advanced Quick Set Options click the Advanced button. The tabs you need to access for white ink workflow are:

- **Postscript**
  In this window ensure that 2-stage processing is turned off in order for Rip to successfully process your white ink data. Note that the default setting is to not use Two Stage Processing so it is not necessary to check this each time you create or edit a Quick Set based on the defaults as long as it has not been enabled in the Default Quick Set.
- **Color Correction**
  This area will link to an existing Filter that has been exported from Preflight's Color Correction area. From Preflight you can export all the settings made using the Spot Layer Tool or any other Color Correction parameters as a Filter for use on files to be prepared for white ink printing. When you link to a Filter the Quick Set will use the same set of parameters that were present when you exported it from Preflight.

Note:
Many of the Quick Set and Filter settings for a job can be overridden in RIP-Queue or Preflight, if desired.

How to Create or Edit a Quick Set for White Ink

1. In ProductionHouse RIP-Queue select your printer, and click on the Configure Printer button. This opens the Configure Printer dialog.
2. From the Quick Sets tab, select the Quick Set you want to edit or copy (or select New to build one from defaults).
3. If you are going to edit an existing Quick Set, Click on Edit. This opens the Edit Quick Set dialog.
4. Make any modifications to the Quick Set that you want to make, and click OK.

Note:
As a shortcut, click the Edit Quick Set button on the toolbar to edit a Quick Set. However, you cannot change the Quick Set Name when you use this method.

5. Use the reference material in the start of this section to guide you in the Quick Set configuration.
6. To use any of the Quick Sets that you created, when you open a file in ProductionHouse you can select a Quick Set from the File, Open dialog box.
7. You can also create a Filter that will save any of the current Spot Layer Tool settings. The Filter will also include any of the other current setting under the Color Correction menu. The Filter will be available for future use with Color Correction or it can be used in a Quick Set.

Chapter 10
Ink System Management

Arizona Printer Inks

Introduction

Océ Arizona printers use two types of UV-curable inks, referred to as Océ IJC255 and Océ IJC256. Both inks are easy to maintain, requiring daily maintenance with a vacuum suction device and a weekly physical cleaning (swabbing). The newer Océ IJC256 inks also require small jetting actions (“spitting”) between printing times to keep the printheads in a ready-to-print state. This spitting action amounts to very little ink usage but does require that the user clean the maintenance tray covers more frequently. Both type of ink include Cyan, Magenta, Yellow, Black, and for printers with the option installed, White. Due to the UV curing technology, the ink dries immediately, but can take up to 24 hours to cure fully. In most cases, the printed material may be handled or cut directly after printing.

When printing with the Océ IJC255 compared with the Océ IJC256, imaging results will be different, – not better or worse but always different. Océ IJC256 has lower dot gain characteristics than Océ IJC255. As a result, there is the potential for more structure and streaking in solid colors and for more image artifacts in areas of heavy coverage (dark colors) with the new formulation. This is especially apparent on many paper-based media used for most indoor applications such as foam board, corrugated cardboard, card stock and poster paper. Océ IJC256 inks also have a softer surface when cured and printed materials are less scratch and smudge resistant. Océ IJC256 inks feel slightly “tacky“ when cured and have a more satin finished appearance when compared to the semi-gloss finish of Océ IJC255 inks. This can be a benefit to distant-viewed applications where glare, caused by the semi-gloss finish of the original Océ IJC255 inks, can be a visual distraction. This particular characteristic is highly subjective and will be appreciated by some customers but not all.

For more details on the characteristics of the two ink types and comparisons of their features, see Application Bulletin 28 - "Selecting Appropriate Océ Ink for Your Applications: Océ IJC255 or Océ IJC256" on the customer support web site at www.dgs.oce.com/.

These inks have very little odor, but for optimal safety some ventilation is needed. The printer should operate in an area where a good standard of general ventilation is available at 5 to 10 air changes per hour. Mechanical ventilation must be added where the air changes are under 5 per hour. Refer to the Site Preparation Guide for minimum space/working room volume for the printer.

Note:
Read the section on ink safety called "Safety Guidelines for Ink Material" before you handle the ink.

The printer is optimized for the specific UV-curable ink supplied by Océ Display Graphics Systems. The ink is supplied to the printer in 2 liter collapsible bags that are loaded into the printer by means of quick-change connectors that are bonded into the top corner. To install on the printer, the bags are inverted and the quick connect couplers are pushed into their corresponding female coupling. This opens up the flow path for the ink. The bags contain tags that identifies them to the printer when they are loaded. This allows the printer to ensure that the correct ink is loaded.

This method of ink delivery has several benefits over bottles or cartridges:
The self-collapsing bags make it easy to see how much ink remains in each bag without having to reference the user-interface.

- Virtually all the ink is successfully extracted from the bag by the printer, reducing the otherwise costly waste of usable ink.
- Ink changes are performed without mess or spills, keeping the environment around the printer clean.
- Ink changes can be performed during printing - this prevents wasted prints and lost time.

Only qualified inks can be used. If a bag of ink with an invalid serial number, expired use-by date, incorrect color placement in the ink bay, or if an expired tag is connected to the printer, then the operator is alerted and an error message is displayed.
The ink delivery system provides the printheads with ink at the appropriate temperature and pressure. Each printhead has a corresponding ink reservoir on the carriage. Pumps supply ink to the reservoirs on demand. Float sensors in the reservoirs control the level of ink and initiate demand when required. Ink temperature control is achieved by pumping a coolant fluid through the ink reservoir block and printheads. An internal thermostat on each printhead and one on the reservoir block provides temperature feed-back.
The condition of the printheads is maintained by periodic cleaning at the maintenance station on the gantry. During this procedure the operator suctions the printhead nozzle plates, removing ink and possible contaminates in the process (details of this procedure are available in the Maintenance section).

UV Flush

UV Flush is used as a cleaning agent for the printheads or to flush the ink lines of ink for a printer relocation or long-term storage.

Caution:
Uncured ink is a serious health and safety risk! Avoid skin contact with ink and wear safety glasses with side shields and Nitrile rubber gloves when handling ink.

Attention:
Do not install inks that are not certified by Océ Display Graphics Systems for use in this printer, as this may result in poor quality prints, uncured ink in the finished prints and permanent damage to the ink pumps, filters, ink lines or printheads.

Note:
The UV lamp power settings can be lowered to reduce warping of some media. However, set the lamp power as high as possible for each media to ensure that the ink cures properly. This will minimize the risk of skin irritation and sensitization from exposure to uncured ink. Wear nitrile gloves when you handle printed media if you suspect the ink is not properly cured.

Illustration

[164] Ink Bay With Bags

Ink Filters

The UV ink in your printer is protected from contaminants in the ink by means of ink filters. These are easily accessed and can be replaced by the operator when they become blocked with debris (see the Maintenance section "How to Change Ink Filters"). The expected average lifetime for a filter is approximately 12 months or 11 bags of ink (22 liters). However, some filters can last longer and some will require more frequent replacements due to the ink color (pigment) and varying rates of use.

Note:
A loss of pigment when printing a nozzle check indicates that a filter is clogged and must be replaced.

How to Store and Handle UV Ink

To ensure good quality images and to extend the life of printheads in your printer, it is important to have good UV ink management procedures. UV inks must be properly handled and stored correctly.

- Inks must be stored within a temperature range of 15° to 40°C (59° to104°F). Exposure to extreme temperatures will reduce the expected life of the ink.
- Do not use ink that is past the expiry date displayed in the Ink System Status menu (click the Ink icon in the Print Job Control module to view the ink menu).
- Perform Printhead Maintenance every day before printing.
- Swab the printheads with UV Flush at least once a week (and as needed) to dislodge any potential buildup of particles or ink.

Access to MSDS Ink Information

MSDS (Material Safety Data Sheets) for each color of ink and the UV Flush are available on the customer web site at: www.dgs.oce.com/. The information on these sheets is more detailed than the material found in the section titled "Safety Guidelines for Ink Materials" in this document. Read and periodically review this safety information to ensure optimal safe handling procedures and proper emergency responses are followed when using UV inks and flush.

How to Change Ink Bags

Introduction

The ink is supplied to the printer in 2 liter bags. The bags have a non-spill coupler bonded into the top corner. When installing onto the printer, the bags are inverted and the quick connect couplers are pushed into their corresponding female coupling - opening up the flow path for the ink. If a bag of ink with an invalid serial number, expired use-by date, incorrect color, or expired tag is connected to the printer, then the operator is alerted.

When to do

An ink bag can be replaced at any time. Ink bags should be replaced if:

- The printer displays an "Error: ink fill timed out" message. This does not necessarily mean that the ink bag is empty, but if you see it, check the level of ink remaining and change the bag if needed. If you see the message and there is still ink in the bag, place a service call.
- The operator sees that the bag is empty.
- An ink bag is nearly empty and the operator wants to leave the printer unattended during a long print and does not want the ink to run out. The nearly empty bag can be reconnected and used up later when the operator is present.

Note:
An ink bag can be changed during a print job. It is not necessary to stop the printer.

When you replace an ink bag you must also bleed air out of the ink filter for that color.

Before you begin

Safety Information - Use appropriate safety equipment - nitrile gloves and eye protectors. Take precautions to avoid ink on your skin or in your eyes.

Caution:
Be sure to read the section on Safety Guidelines for Ink Materials before handling UV inks. Also, read the MSDS sheets available from the Customer Support web site for more detailed information on ink safety and handling.

How To Change an Ink Bag

Attention:
For personal safety, we recommend that the operator always wear nitrile gloves, a protective apron, and safety glasses with side shields when handling inks.

1. Open the sliding maintenance station door to disable the ink pumps.
2. Open the clear plastic door on the Ink Station.
3. Identify the the ink bag to be replaced.
4. Press the quick-release tab and disconnect the ink bag coupler at the bottom corner of the ink bag.

[165] Remove Ink bag coupler

5. Lift the empty the bag out of the ink station.

[166] Detach ink bag coupler

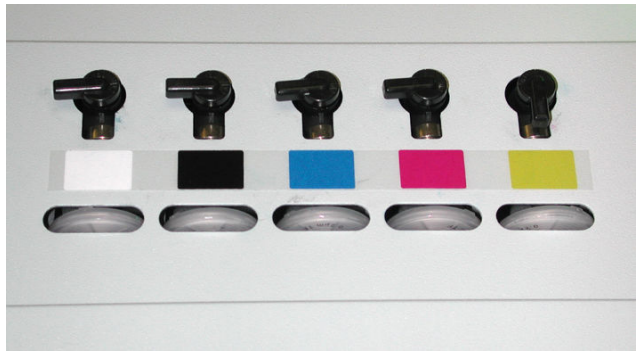
6. Replace with a new ink bag of the same color but do not connect the ink bag coupler yet.
7. Bleed the air from the ink filter of the same color as instructed in the next procedure.

Note:
If you place a bag in the wrong ink station (for example, yellow ink in the black ink station) the display will show an error message and the printer will not print until the correct bag is installed.

How to Bleed an Ink Filter

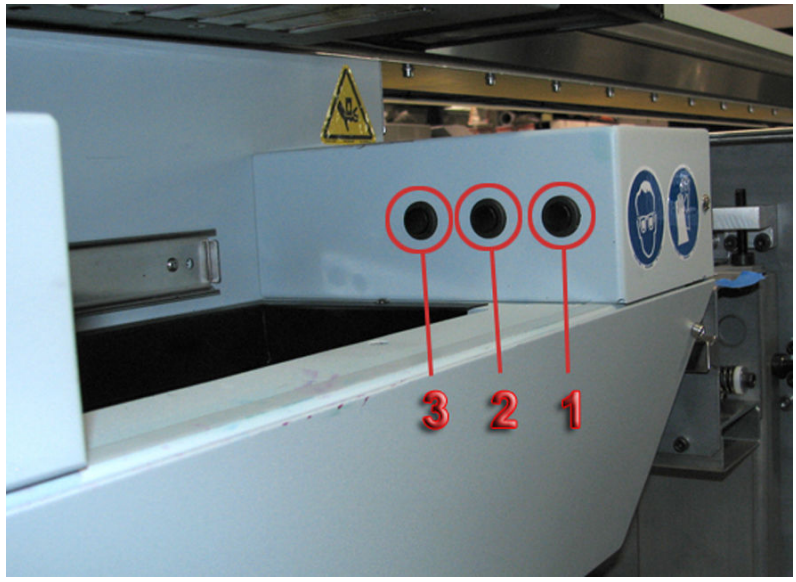
Ink filters are located in the Ink Filter Enclosure to the right of the printer's AC power switch.

1. Close the ink purge valves of the three (or four) other colors, but leave open the valve of the target color. These valves are located on the top of the carriage and are color-coded.



[167] Yellow Purge Valve Open

2. Click on the ink status icon located in the top right corner of the Print Job Control screen of the printer software to monitor the ink status.
3. Press the Purge button (switch 1 on the right) to initiate an ink purge. Repeat this step until the ink status window shows an Ink Low condition for the target color.



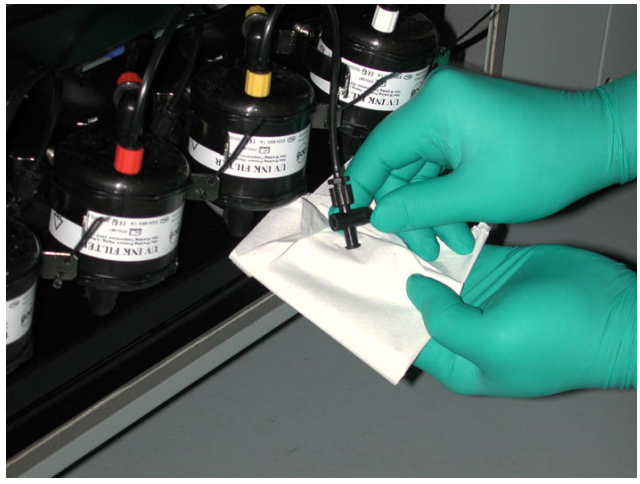
[168] Maintenance Station Buttons

4. Press the Raise Carriage button (switch 2, middle) and then use the suction nozzle to remove any excess ink from the printhead that you purged.

5. Remove the two screws that hold the ink filter enclosure cover in place (thumbscrews can be loosened by hand or use a Philips screwdriver if they are too tight).

[169] Remove Ink Filter Enclosure Cover

6. Close the maintenance station door to enable the ink pumps.
7. In the Ink Station reconnect the ink bag coupler of the new ink bag to re-initiate ink fill.
8. Locate the bleed tube valve on the top of the ink filter you are going to change (the cap that holds it in place indicates the color of the ink line into that filter).
9. Wrap a lint-free cloth around the end of the bleed tube of the ink filter to catch any ink in the next step.



[170] Ink bleed tube valve

10. Turn the bleed valve shutoff lever so that it is parallel to the bleed tube to open the valve.

Note:
The ink system is under pressure and so it is possible that some ink may spray out at first. Keep the cloth wrapped around the end of the bleed tube for about 20 seconds so that any ink spay is contained.

11. Unwrap the cloth but keep it close as you watch the open bleed valve. As soon as you see ink in the open end of the bleed tube, flip the shutoff lever back to the perpendicular closed position (this may take a few minutes, depending on the amount of air in the filter since the ink pump is only active for a brief period every 10 seconds).
12. Open the other ink purge valves that were closed in Step 1.

Note:
If a purge valve is left closed, there is no vacuum pressure to hold the ink and it will drip out of the printhead. Drops of ink will appear on the media if you print with purge valves closed.

13. Repeat the above procedures for any other new ink bags.
14. Perform routine printhead maintenance before printing.

Chapter 11
Error Handling and Troubleshooting

Troubleshooting Overview

Introduction

This section covers general problems that may occur with the printer. Malfunctions that trigger system error messages can be caused by human error, a system malfunction, an interface cable malfunction, mechanical printer malfunction and/or printer firmware failure.

Definition

Printer Errors

Some errors are problems that interfere with the print process but do not shut down the printer completely. Typically, these errors are problems that prevent starting a printing job or that interrupt the current print. You should be able to fix these errors without a service call. Other errors stop the printer and prevent operation until the error is resolved. The printer interface informs you as to what is wrong by displaying an error message on the LCD display. If the error message has an obvious solution, apply the appropriate remedy. Otherwise note the exact error message and associated error number and what the printer was doing before the error, then place a service call.

Basic Troubleshooting

Troubleshooting helps you locate the source of errors and fix common problems that can arise during printing.

Troubleshooting Areas:

- Printer behavior
- Print quality
- Data transfer

Example 1

If There is No Power

Is the printer connected to a working power source?

The service should be a dedicated supply that is not susceptible to voltage fluctuations. This service must be provided via an independent, double pole, fused circuit breaker and a circuit ground (computer grade) located near the machine. The service should meet all local and national standards for this type of installation. The circuit breaker should be clearly labeled, indicating the On and Off positions, such as '1' for On and '0' for Off. A suitable air gap should be maintained for safe electrical isolation when in the Off posi-

tion. The printer relies on this service for primary branch protection. If the printer is without power, check the local supply voltage and verify that it is set correctly.

Example 2

Drops of Ink Appear on the Media

- Check that the ink valves on top of the carriage are all open. If an ink valve is closed, there is no vacuum pressure to hold the ink and it will drip out of the printhead.
- Check that there is no hair or other debris on the underside of the carriage. Objects can accumulate ink mist and result in small drops of ink.

If Problems Persist

If problems persist, perform the following actions as appropriate for the situation:

- Check for media that is buckling or sitting too high on the table.
- If you just changed ink in the printer, review the procedures in this manual and check for successful installation.
- Try printing a test print.
- If the printer is not receiving print jobs, check the network cable connection.

Note:
If you still have problems, contact your Océ Display Graphics Systems service representative.

Call for Service

Try to eliminate simple problems before you call your service representative. However, it is important to know when to call for service. Without training, servicing the printer yourself may cause further damage. When you have determined that a service call is required, call as soon as possible. Have the following information ready:

- Printer serial number — located near the AC power plug.
- Error message displayed on the control panel, if any.
- The exact circumstances when the error occurred, such as during printing, or maintenance.
- Note any unusual phenomena, such as peculiar printing, noises, and smells associated with the failure.

How To Improve Quality When Banding Occurs

Introduction

Banding can occur in an image for a number of reasons. Typically it occurs due to neighboring nozzles that do not fire or multiple nozzles that fire with poor directionality. This can occur if the printer sits idle for an extended period of time (e.g., overnight or longer), or if debris has been picked up from the media or table by a printhead. If this happens, perform the Printhead Maintenance procedure to clear the affected printheads. If banding is evident, print a nozzle check to identify which nozzles of a particular print head are not firing. After you perform the printhead maintenance, print another nozzle check to confirm whether the problem has been fixed.

If a print shows banding and a nozzle check print shows more than three separate nozzles out or two or more adjacent nozzles out, the following procedures for recovering clogged nozzles is recommended to improve image quality.

Note:
Keep the table surface clean and ensure the media is clean and free of dust to help reduce banding. Use an anti-static brush, if necessary. Also use a micrometer to accurately measure the media thickness so the proper printhead gap between the printhead and the media is used. If the printhead gap is less than it should be, there is a greater probability of picking up debris on the printheads

Recovering Clogged Nozzles

When banding appears in an image and nozzle dropouts appear in the Nozzle Check print, we recommend that printhead maintenance is performed. In some cases it may be beneficial to print an image file after maintenance, to exercise the firing of the nozzles, then run the Nozzle Check again.

If some nozzles are still out, perform a purge of only the printheads with nozzles out. To do this, close the ink valves of the colors that don't require a purge, then purge to remove excess inks.

If dropouts still persist, you can also swab the printheads.

Chapter 12
Printer Maintenance

Maintenance Guidelines

Introduction

The printer operator is responsible for the regular maintenance of the printer. This section provides detailed information about what is required for proper printer maintenance.

While Océ Display Graphics Systems furnishes guidelines for periodic maintenance, the optimum maintenance schedule evolves from careful observation of your printer over a period of use. For example, some specified maintenance may be required each time you use a particular media. The type of print job can also determine the maintenance schedule. If the printer produces a high volume of solid fill prints, it requires more tending than if it prints low-coverage images. Océ Display Graphics Systems requires that the operator follows minimum cleaning and replacement guidelines as described in this User Manual.

A few minutes spent cleaning helps to ensure the highest quality prints. Each production situation is different and involves different types of print jobs, environmental conditions, duty cycles, and volume of work. While we provide guidelines for periodic maintenance, the optimum maintenance schedule depends on operator observation of the printer over a period of use.

Attention:
Keeping the printer clean, especially all parts associated with the printheads, assures that your printer performs at its optimum and makes it easier to diagnose a problem, such as a leak. Daily cleaning of all mechanical parts on the printer is highly recommended.

Who Should Do Maintenance?

If your site has a technician in charge of machine maintenance, that person is the optimal candidate. While routine maintenance may be performed by any trained operator, the best maintenance results from familiarity with the printer's internal operation and history.

Operator Maintenance Schedule

Your printer requires regular maintenance. Periodic cleaning should be scheduled for some components during the week. A few minutes spent cleaning ensures the highest quality prints. Several areas require maintenance to ensure the highest print quality, and the printer design gives you easy access to all these areas. Diligent application of the maintenance schedule ensures optimum performance from your printer.

Note:
Do not bump the carriage or gantry as this can cause dropouts in the printhead nozzles. A hard bump can break the miniscus vaccum in the ink lines and thus allow air into the lines, which blocks the nozzle until a purge is performed. Also some procedures, such as Printhead Maintennce, require that you slide open the door to access the maintenance station. Do not bang the door hard when you close it after maintenance.

The following table provides our recommended maintenance schedule. This is a minimum requirement and some procedures may need to be done with greater frequency. Each of the procedures is explained in detail in this section in the order of frequency required as presented in this table.

Maintenance Frequency

Procedure	Frequency
Clean Carriage Underside	Daily and as needed
Printhead Maintenance	Daily and as needed
Swab Printheads	Weekly and as needed
Clean UV Lamp Filter	Weekly and as needed
Remove Ink from Table	As needed
Empty the Waste Tray	Monthly and as needed (or when ink overflows!)
Refill Coolant	Monthly and check weekly
Clean Gantry Rails	Monthly and as needed
Change Ink Filters	Yearly, or after 11 bags of ink, or if pigment looks weak
Reprint the Rulers	When the rulers become unreadable
Change both UV Lamps	When curing is insufficient
Change Coolant	Yearly (requires a service call)
Maintain White Ink	Daily, Weekly and, as needed

Maintenance Procedures

Clean Carriage Underside

Introduction

To maintain optimal print quality, it is important to periodically clean the underside of the carriage to remove any excess ink. If the buildup of ink is excessive, it can be transferred to media and thus reduce print quality.

When to do

As part of the daily maintenance at the start of the day, or as needed, clean any ink that has accumulated on the underside of the carriage.

Note:
The accumulation of ink on the carriage underside is caused, at least in part, by static particles from the media. Dust particles and other debris from the media surface tend to attract ink mist when they have a static charge. To remove particles and to reduce the static charge buildup on the media, use a tack cloth and lightly rub the media surface before you print. You may also need to install a humidifier if humidity is below the required minimum defined in the Océ Arizona 550 GT Site Preparation Guide (30% to 70%, Non-condensing is the suggested range for operating the printer).

Before you begin

Make sure the carriage is in the parked position. The carriage and gantry automatically return to this position after an image is printed.

It is not necessary to turn off the UV lamps as they are shuttered. However, they will be hot if they are on, so avoid touching them.

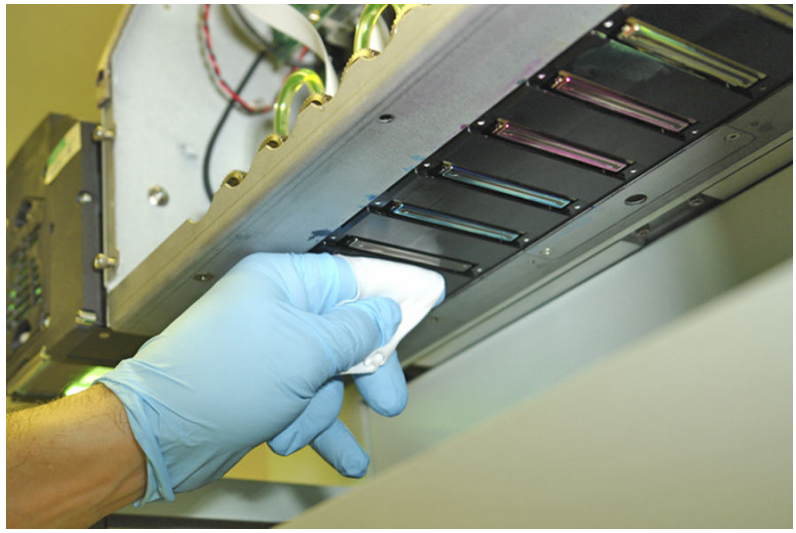
Required tool

- Cloth-Poly Wipe 10cm x 10cm

Note:
Safety glasses with side shields, nitrile gloves and a protective apron must be worn when you handle ink.

Caution:
The underside of the UV lamps may be hot, avoid touching them.

Illustration



[171] Ink Removal Technique

How to Clean the Carriage Underside

1. Slide the maintenance station cover plate out from under the carriage to reveal the maintenance station.
2. Press switch 2 to raise the carriage to its maximum height.
3. Wrap a clean poly wipe cloth around your index finger.

Attention:
In the next step, make sure that you do not touch the nozzles of the printheads. If you happen to touch one with the cloth, you must perform a printhead maintenance. Note that contact with the printhead by any object other than the suction-head used for maintenance can cause damage to the nozzles and result in poor image quality or possibly require a printhead replacement.

4. Slide the cloth along the metal plate between the first two printheads to remove any ink that has accumulated.
5. Reposition the wipe so that a clean area is wrapped around your finger.

6. Proceed to the next space between printheads and slide the clean area of cloth along the metal plate.
7. Repeat steps 3 to 6 until all ink is removed from the spaces between printheads. Use a new cloth wipe, if necessary.
8. Slide the maintenance station cover to the closed position.

Printhead Maintenance

Introduction

The Maintenance Station is located below the carriage. Printhead Maintenance takes place while the carriage is parked. The station is covered by a sliding drawer and has an open grid (spit catcher) in the center that allows any waste ink to drip down into the waste tray. When you perform printhead maintenance, any excess ink and associated debris are removed from the nozzles with the result that ink drops can jet properly when the nozzles are clear.

Ink fill is disabled when the maintenance station sliding drawer is open. No more than 4 purges can take place (minimum of 10 seconds between purges) without closing the drawer, which allows the reservoirs to refill.

Note:
The nozzle plate on the printhead has a non-wetting coating - contact with this surface may affect the performance of the printhead. Do not wipe the nozzle plate with anything other than the suction-head (or the supplied swabs when following the swab procedure) as this can damage the nozzles and impair performance.

Purpose

To clean the nozzles of the printheads and thus ensure better image quality and avoid banding.

When to do

Maintenance occurs at the start of the day (after the printer has warmed up) or when necessary (misfiring nozzles, banding in image, etc.).

Note:
More maintenance is required in dusty environments, or when there are fibers protruding from the media, or when printing on reflective media such as glass or metal (more reflected UV light hits the printheads). When printing on reflective media it is advised to monitor the nozzle check and printhead nozzle plates and perform additional printhead maintenance if required, to prevent ink from partially curing/gelling on the printhead nozzle plates).

Before you begin

Make sure the carriage is in the parked position. The carriage and gantry automatically return to this position after an image is printed. Do not move the carriage or gantry from this position as this will disable the ink pumps and thus prevent the performance of an ink purge, which is necessary for printhead maintenance.

Note:
The UV lamps will turn off when you open the Maintenance Station drawer. However, the lamps will be hot, so avoid touching them.

Ink must be at the operating temperature of at least 40° Centigrade (104° Fahrenheit) before you perform printhead maintenance. The Job Control module displays the ink temperature. If the temperature is low, activate the ink heater by clicking the icon and then monitor the temperature display.

Required tool

- 3010104959 Cloth-Poly Wipe 10cmX10cm

Note:
Safety glasses with side shields, a protective apron, and nitrile gloves must be worn when performing maintenance.

Caution:
The underside of the UV lamps may be hot, avoid touching them. Also, be aware that the carriage moves up and down during printhead maintenance and there is a crushing hazard if your hand or arm are placed in the area above the three switches.

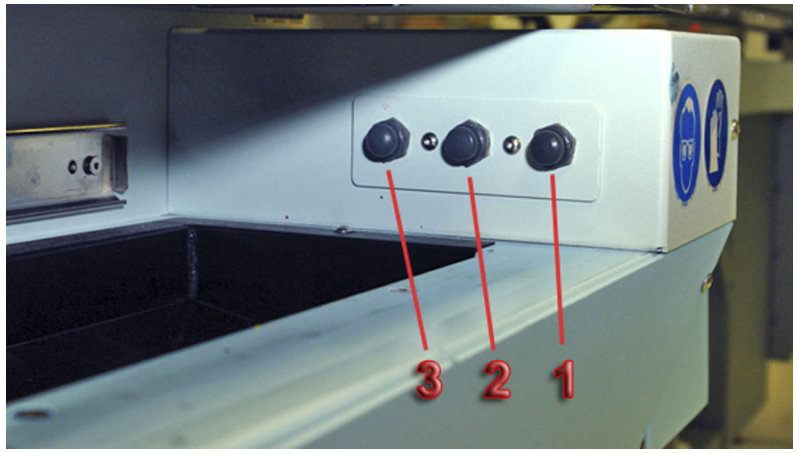
Attention:
Do NOT press up too hard on the printhead while you swipe it with the suction-head as this can dislodge the printhead and require a service call to re-seat the printhead.

Maintenance Station Switches

There are 3 switches inside of the maintenance station . They can be operated in any order. For example, you can press the second switch to raise the carriage to remove debris from the underside of the carriage even when a purge is not required.

1. Switch 1 to purge ink
2. Switch 2 to raise carriage
3. Switch 3 to activate suction pump

Illustration



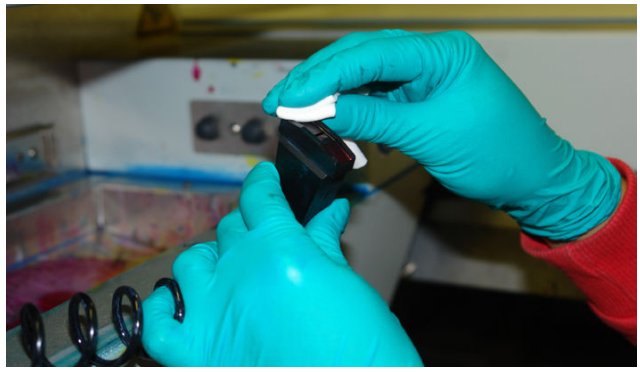
[172] Maintenance Station Switches

How To Perform Maintenance

1. Verify that the ink temperature is at least 40° Centigrade (104° Fahrenheit) before you begin printhead maintenance.
2. Slide the maintenance station drawer out from under the carriage.
3. Press and release switch 1 to initiate a purge. The carriage will lower to its purge height (4mm above the table surface). Watch the ink as it falls from the heads. After a few seconds most of the ink stops dripping and you can then raise the carriage.
4. Press switch 2 to raise the carriage to its maximum height.

Attention:
Be careful not to snag the coiled suction-head hose when removing the suction-head from the holder.

5. Press switch 3 to turn on the suction pump. Pick up the suction-head from the tray at the left end of the maintenance station. Wipe the suction-head with a new, clean lint-free wipe to remove any particles that could damage the nozzles in the printheads.



[173] Clean Suction-Head

Note:
In the next step, start with the left printhead and work to the right as this limits the possibility that drops of ink will fall onto the coiled hose. Also, do not push up too hard on the printhead as you may dislodge it and this will require a service call to fix.

6. Slide the suction-head slowly along the entire length of each printhead at a speed of approximately 8mm per second (8 seconds per printhead). The suction-head slides on stainless steel strips on the printhead. It may be necessary to repeat this step in the following cases:
a) Visual inspection of the printhead shows signs of ink remaining on the nozzle plate;
b) Suction-head was not kept level during travel across the nozzle plate;
c) Suction-head was pulled too quickly or unevenly across the nozzle plate.

[174] Swipe Printhead

7. Wipe the suction-head on a clean piece of new lint-free wipe before proceeding to the next printhead.

Note:
During maintenance, be careful not to touch the nozzle plates as this can damage the printhead.

8. Slide the maintenance station drawer back to its closed position. The carriage will move back to its previous print-ready height.

Note:
Close the drawer slowly to avoid disturbing the ink vacuum.

9. Print a Nozzle Check to evaluate print quality.

Note:
If the Nozzle Check print shows that a printhead still has a few nozzles out you can slide the suction-head over that printhead again. Then print another Nozzle Check and if there are still nozzles out, you can perform printhead maintenance on that printhead only (See Maintenance for Select Printheads below).

How to Print a Nozzle Check

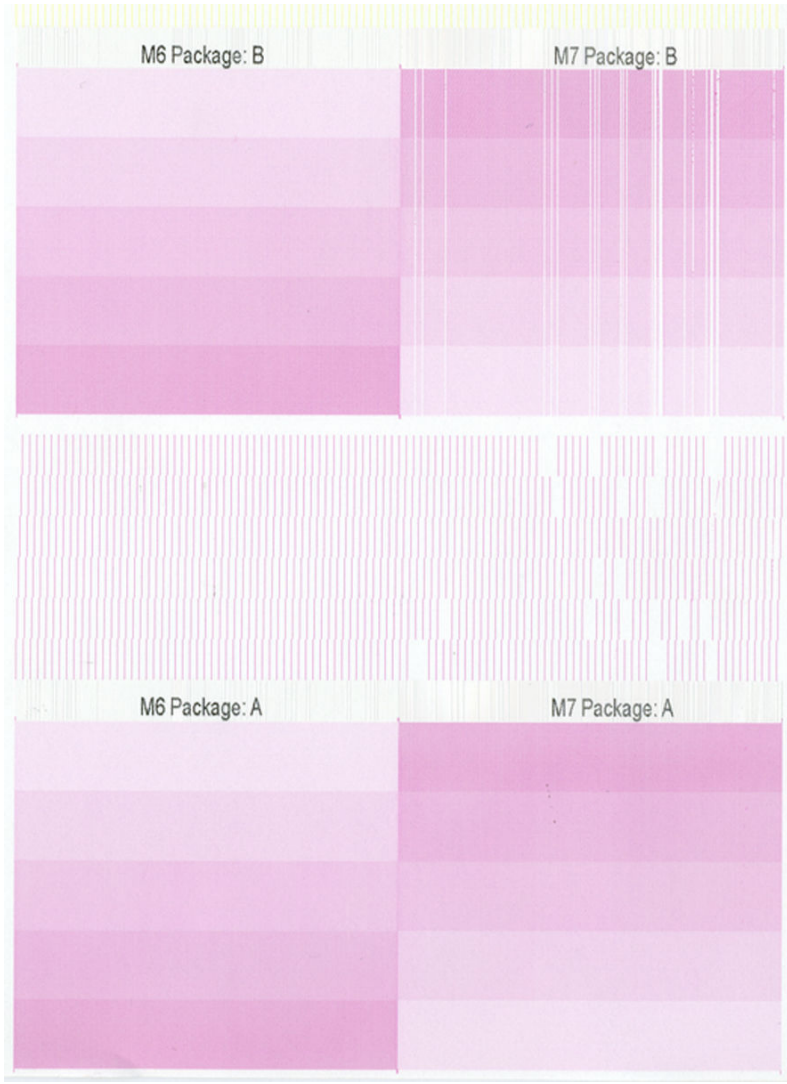
The Nozzle Check print fires each nozzle individually in a manner that allows clogged nozzles to be easily identified by a visual inspection of this special print. The Nozzle Check has been designed to fit on a piece of media that is 42" (96 cm) and is 4.25" (10.8 cm) wide. Since you are likely to print more than one when you diagnose nozzle problems, make sure your media is wide enough. Calculate the required offset when you print multiple consecutive nozzle checks, and add the offset to each consecutive print.

1. Place a piece of Océ I/O paper on the printer table (or use the RMO, if available).
2. Select the Nozzle Check icon at the right end of the Command Toolbar to place the nozzle check into the Active Print Job list (you can also add a Nozzle Check to the active print list when you select it from the Special Prints module).
3. Confirm media thickness.
4. Activate the table vacuum (if printing on the table).
5. Click Print to start.

How to Evaluate a Nozzle Check

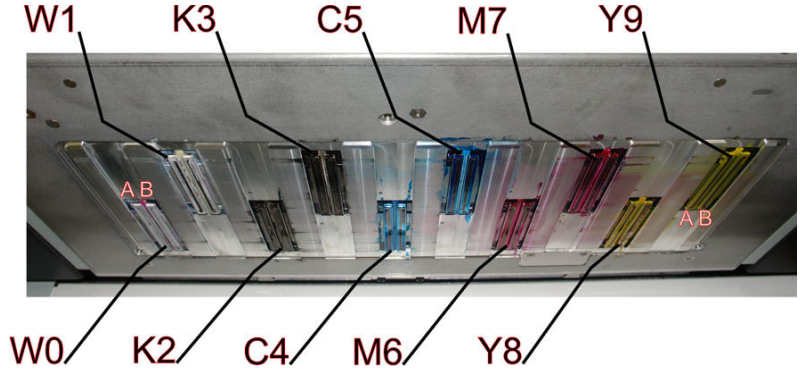
1. The Magenta section of the Nozzle Check print example shown in the figure below indicates that multiple nozzles are out.

Note:
This is an extreme example to illustrate the problem. In most cases you will likely see only two or three nozzles out.



[175] Nozzle Check Print Magenta

2. In the above example, Magenta printhead 7 Package B is the printhead with nozzles that are not firing properly. The illustration below shows the relationship between the actual printheads, as viewed when looking up from below the maintenance station, and the output of the nozzle check print.



[176] Nozzle Print Orientation

Note:
Based on the perspective shown in the illustration, Package A is always the row of nozzles on the left side of a printhead and Package B is always the row of nozzles on the right side of a printhead.

3. Once you have identified the particular printhead that has nozzles out as indicated by the nozzle check print, you can perform the following procedure to correct the nozzle dropouts.

How to Correct Nozzle Dropouts

1. If there are only a few nozzle dropouts per printhead, try suctioning the affected printheads again without purging. If many nozzles are out, perform Printhead Maintenance again.

Note:
If the nozzle dropouts are only indicated on a single printhead you can perform maintenance on a select printhead as indicated in the procedure below.

2. Print another nozzle check and repeat step 1, if necessary.
3. If nozzle dropouts still remain, swab that printhead (see the next section).

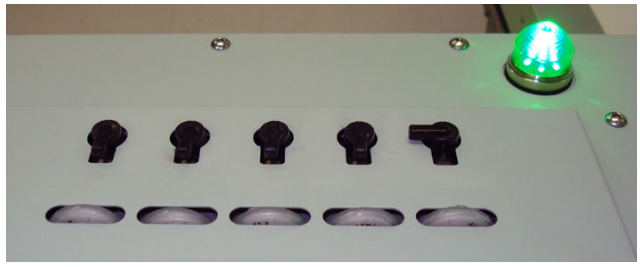
Result

When a printhead does not have any nozzle dropouts, the Nozzle Check print will look like the Magenta 6 Package A and B and Magenta 7 Package A printheads seen in the example above.

Maintenance for Select Printheads

1. On the top of the carriage there are 5 ink purge valves. If you have performed printhead maintenance and find that one or more printheads require additional maintenance, turn off the valves of all the other colors.
2. Perform all of the steps for printhead maintenance again, but only on the target printheads.

Note:
Isolating an individual color does not perform a stronger purge, but it does conserve ink.



[177] Purge Valves with Yellow Turned Off

3. Remember to open any purge valves that were closed for this procedure before you close the maintenance drawer.

Note:
If a purge valve is left closed, there is no vacuum pressure to hold the ink and it will drip out of the printhead. Drops of ink will appear on the media if you print with purge valves closed.

4. If problems still persist, perform the swab procedure on the affected printhead (see the next section).

Swab Printheads

Introduction

To ensure optimal print quality, it is important to periodically clean the printheads with a swab to remove any excess ink or any debris that was not removed by Printhead Maintenance.

Purpose

Important Caution: To maintain print quality it is very important to swab the printheads at least once a week, or more frequently, if required. Failure to do this may result in **permanent printhead damage**.

When to do

At the end of each week, clean the printhead nozzle plates using the swabbing procedure. This procedure may also be used when regular printhead maintenance fails to fix blocked or misfiring nozzles or to remove debris from the bottom of the printhead.

Note:
If UV ink has fully cured on a printhead it must be replaced. Contact your Océ service representative.

Before you begin

Print a Nozzle Check to determine if any nozzles are not firing properly. This will help to determine whether some or all of the printheads must be swabbed. You can also do a visual inspection of the nozzles (use a flashlight if the ambient room light is not adequate). A small bottle (125ml) is supplied with the printer accessory kit. Label this bottle as "Flush" and use it only to hold flush for use during the swab procedure. To prevent contamination of the flush in the bottle, never re-dip a used swab in the flush.

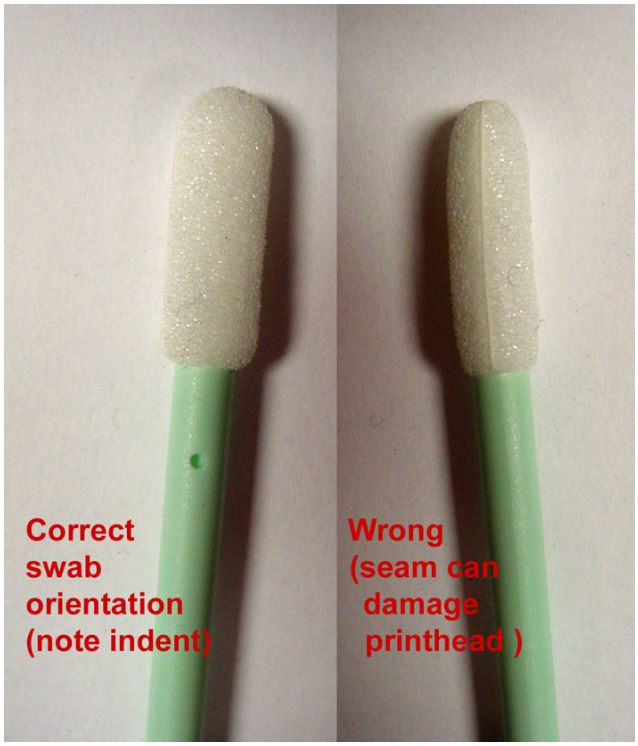
Required tool

- Foam Tipped Swabs (3010105434 Swab Foam Flex Tip)
- Flush (3010106646 Flush UV 1 Liter)
- Bottle-HDPE 125ml for flush (3010105433)
- Nitrile Gloves
- Safety Glasses with side guards

Attention:
Never "scrub" the printhead with a swab as this will drag debris into other nozzles.
Always slowly move the swab across the printhead with the swab at a slight angle and not perpendicular to the printhead.
Never use Isopropyl alcohol to clean the printheads.
Do not allow swabs to be contaminated with any dust or dirt prior to use.
Note that the swab has a seam that can damage the printhead nozzles; use only the semi-curved foam sides of the swab.

Caution:
Use appropriate safety equipment — nitrile gloves, an apron, and safety glasses with side shields to protect your eyes.

Illustration



[178] Proper Swab Orientation

How to Swab a Single Printhead

Note:
Swab one printhead at a time to reduce ink waste during the purge and also to minimize ink spill on your hand and arm. In order to achieve the most effective swab, it is best to swab immediately after a purge while the ink is still dripping from the printheads. Close the ink valve so that the ink is under slight pressure to help clear debris from around the nozzles.

1. Open the maintenance station cover.
2. Close the ink purge valves of the three other colors, but leave open the valve for the color you will swab.

Caution:
Make sure that your arms are covered, wear nitrile gloves, and use safety glasses with side shields.

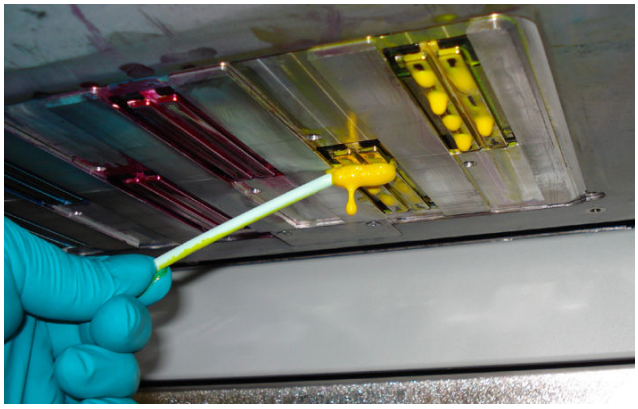
3. Dip a swab in a small container of flush.

Note:
Use 1 swab per printhead. Do not re-dip a swab into the flush.

Attention:
Flush is an aggressive solvent and should not be splashed or sprayed around the printheads. If flush comes into contact with any part of a printhead other than the nozzle plate remove it immediately with a clean lint-free cloth.

4. Press and release switch 1 to initiate a purge.
5. Within 3 seconds of pressing the purge button, close the remaining purge valve. The carriage will lower to its purge height (4mm above the table surface) and the ink will continue to drip from the printheads.
6. While the ink is still dripping, position the swab at the far end of the printhead and slowly draw the swab towards you. Hold the swab at an angle to limit dragging debris from one nozzle to the next. **Do not let the seam in the foam touch the nozzle plate**.

Note:
It is important to ensure the flush-soaked swab contacts only the nozzle face of the printhead.



[179] Swab the Yellow Printhead

7. Rotate the swab by 180 degrees and repeat the previous step.
8. Discard the swab and repeat Steps 2 to 6 for all the other printheads (if needed).
9. Perform Printhead Maintenance.
10. Once finished, all residual flush and ink in the gaps around the head should be carefully wiped away with a clean swab.
11. Run a Nozzle Check print or an image test print and verify that all nozzles are firing properly.

Note:
If the problem persists, you can swab multiple times. Use a new clean side of the swab each time (this means a maximum of two swipes per swab). It is possible that as many as ten swipes can be required. If purging and swabbing does not recover a blocked nozzle, holding a flush-soaked swab against the blocked nozzle on the printhead for at least ten seconds is an effective way of clearing the blockage.

12. Run another nozzle check, if necessary. When the Nozzle Check print does not show any nozzles out, the printer is ready to produce quality images.

How to Clean the UV Lamp Filter

Introduction

The top of the housings for the left and right UV lamps contain a filter that keeps dust and other airborne particles from entering the lamp housings. If the filter becomes clogged with dust and debris it can cause overheating of the lamps.

When to do

Check the condition of the filters weekly and clean them as needed. If dust accumulates, this can lead to overheated lamps and results in an error message. Clean the filters at least once every three months to avoid overheating. If you receive a lamp overheat error, check for dust or debris. If you get a lamp overheat error and there is no dust on the filter, call for service immediately.

Note:
When you change a UV lamp bulb, replace the filter.

Before you begin

1. Turn off the ink temperature.
2. Turn off UV lamps.

Required tool

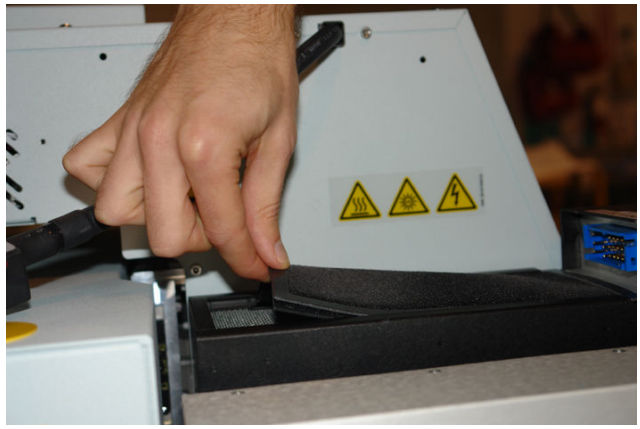
- small hand vacuum cleaner

Note:
Always wear cotton gloves and protective safety glases when handling UV lamps and the reflecting shutters.

Attention:
Failure to clean the filters can lead to overheating of the lamps and result in a shorter lamp life.

Clean the UV Lamp Filter

1. Wait for the lamp fans to stop to ensure the housing has cooled down.
2. Remove the lamp filter by first lifting one corner, then bend it in the center by placing your finger under the filter and lift it away from the power connector and off the lamp housing.



[180] Remove Lamp Filter

3. Move away from the printer and use a vacuum cleaner to remove any debris or dust.
4. Replace the lamp filter by inserting one long edge into the channel on top of the lamp housing, and then squeeze the filter so that the middle bulges and allow the other edge to slide into the other channel.
5. Repeat steps 2 to 4 for the filter in the other UV lamp assembly.

How to Remove Ink

Introduction

How often you need to perform these procedures will vary, depending on printer usage and work habits.

Remove ink from the table and other metal surfaces:

Remove ink from the table whenever necessary. If the ink is not cured, you can wipe it up with a paper towel or lint-free cloth. Once UV ink is cured, the best method for removing it from the table is to use a scraper (it is also possible to achieve good results with a razor blade that is set into a handle/holder - but not on painted surfaces). Be careful not to scratch the aluminum surface of the table when scraping off the cured ink.

Unplug vacuum holes:

The vacuum holes in the table surface may become plugged with ink and thus reduce the efficiency of the vacuum. To clear the holes, use an 1.5mm diameter rigid material (e.g., a paper clip) to ream them out, as required (this is not likely a daily task, but must be performed as needed).

Required tool

- Lint-free absorbent clothes
- Nitrile Gloves and wrap-around safety glasses
- Isopropyl alcohol (95% pure)

Note:

When scraping ink off the table be sure to remove all of the dry ink particles. Use a portable vacuum and then a wet lint-free cloth to ensure no debris is left on the table that could be picked up by a printhead.

How to Remove Uncured Ink from the Table

Caution:

Avoid skin or eye contact with uncured ink as it will cause irritation and sensitization. If a nitrile glove is contaminated with ink, replace it within a few minutes.

1. Wipe up the majority of the ink by blotting with an absorbent cloth.
2. Wet a new absorbent cloth with alcohol and wipe up the remaining ink.
3. Continue to wet and wipe the surface until the cloth does not show any sign of ink color.

How to Remove Cured Ink from the Table

1. Scrape any cured ink from the surface of the table with a scraper (or a razor blade in a holder).

Note:
Do not use a scraper on any of the printer skin surfaces or the Maintenance Station as this will scratch the finish.

2. Use a vacuum cleaner to remove the scraped particles of ink and any other debris on the table surface.
3. Use a lint-free cloth soaked in isopropyl alcohol to ensure that the table surface is clear of any remaining particles.

How to Clean Ink from the Maintenance Tray

During regular daily printhead maintenance, observe the grid on the top of the maintenance station when the drawer is open. If you see any accumulation of ink, clean as follows:

1. Slide the door out from under the carriage to reveal the maintenance station.
2. Wipe up the majority of the ink by blotting with an absorbent cloth.
3. Pour some alcohol on a lint-free cloth and wipe away any ink deposits.
4. On a new cloth, apply some alcohol and remove any residual flush or other debris.

Note:
If you leave the maintenance door open and do not wipe away any deposited ink, it will gradually cure from exposure to light and thus become very difficult to remove.

How to Unplug Vacuum Holes

1. Identify any vacuum holes that are plugged with ink.
2. With an 1.5mm diameter rigid material (e.g., a paper clip), ream out any of the holes that have been plugged.
3. Clear any resulting debris with a vacuum cleaner or a wet lint-free cloth.

Empty the Ink Waste Tray

Introduction

The waste tray is located below the printer carriage and Maintenance Station. It accumulates ink that has dripped from the printheads. The ink drops throught the slots onto a sloped drain plate at the base of the Maintenance Station and drains from there into the waste tray.

When to do

Check the waste tray periodically and empty, when needed. When you perform Printhead Maintenance, it is a good practice to visually examine the sloped drain plate at the bottom of the Maintanance Station. If ink starts to pool on the drain plate it is time to empty the waste tray (if you can see ink it means the the waste tray is full and is now backing up into the maintenance station). The capacity of the waste tray is approximately 1.4 liters.

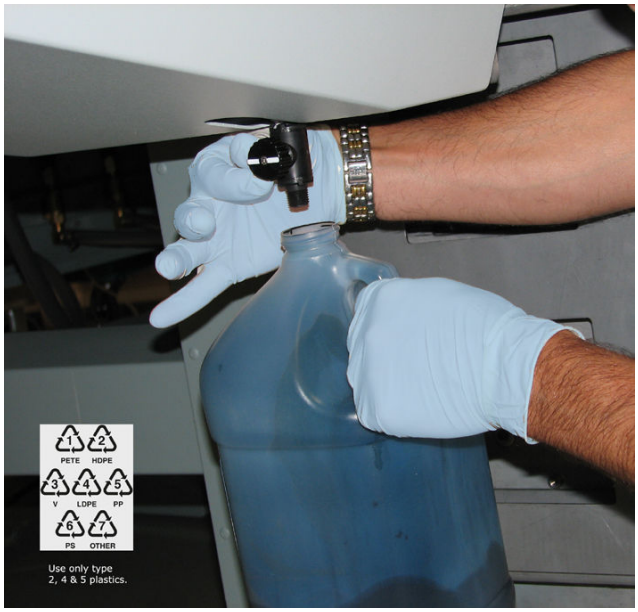
Required tool

- Cloth or paper towel
- Empty semi-transparent plastic container (use only LDPE, HDPE or PP pastic)
- Nitrile Gloves and safety glasses

How to Empty the Waste Tray

1. Put a cloth or paper towel on the floor to catch any drips while the tray is emptied.

2. Place a suitable empty container that holds at least 2 liters under the waste tray drain valve.



[181] Empty Waste Tray

Note:
Use only type 2, 4, and 5 plastic containers (LDPE, HDPE or PP) as the UV ink will attack other kinds of plastic and this can result in an ink spill.

3. Turn the valve on the waste tray until it starts to drain the waste material.
4. Shut off the valve when ink waste no longer drains out (or if the container become full).

Note:
Use a piece of cloth or paper to wipe the valve clean as some ink can remain inside and drip out later when the printer is in motion.
Warning: All waste containing uncured or partly cured UV ink is hazardous and must be disposed of separately according to local regulations. Do not mix ink waste with non-hazardous waste (household, office, etc.). Do not allow it to reach sewage systems or drinking water supplies. Ink waste includes maintenance pads and cloths, gloves and any other material containing uncured or partly cured ink.

5. Dispose of the waste material in a suitable, environmentally-friendly manner.

Fill the Coolant Reservoir

Introduction

The coolant is a thermal fluid used to maintain the temperature of the ink in the printheads and ink reservoirs on the carriage. Temperature control of the ink is required in order to achieve the correct ink viscosity, which affects the jetting velocity of the ink and thus the quality of printed images. The coolant is pumped through a heated manifold and then through all of the print heads and then returns to the coolant reservoir. Each printhead has an internal sensor that provide temperature feedback. The coolant reservoir contains a sensor to alert you if the level is too low. A sight-window on the side of the carriage, displays the reservoir coolant level. The operator must maintain this level at or near full.

Purpose

If the coolant level is low, the ink and printheads cannot be maintained at the proper temperature. Periodically check the level of coolant and add more if it is below the center of the sight-window.

When to do

Check the coolant level sight-window, located at the side of the carriage, at least once a week to see if the level is low. When filled to the proper level, the fluid will be at the top of the sight-window. If the level of coolant is lower than the center, it is time to fill it. Keep the coolant at the full level to maintain the proper ink temperature as the coolant is important to that process.

Note:
Change the coolant fluid at least one time every 12 months with new coolant. Over time and with use, crystal deposits build up in the coolant and can impede the flow and result in pump damage. Consult your service representative for details.

Before you begin

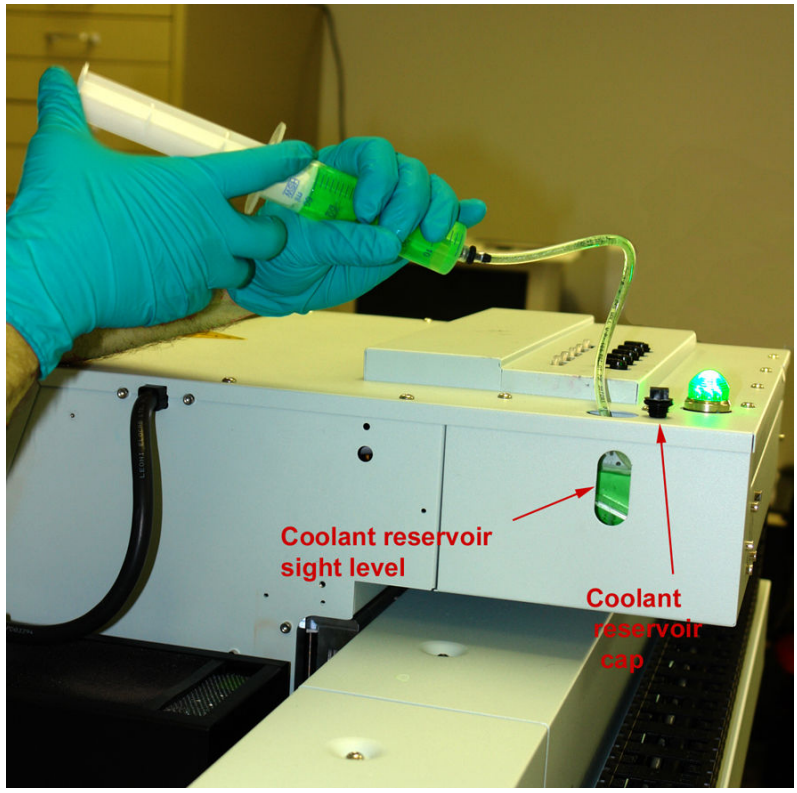
Verify that the coolant level is low in the sight-window. If it is near the top, it is not necessary to add coolant.

Required tool

- Syringe (supplied with Starter kit)
- Wear gloves (coolant will not harm the skin, but gloves are recommended).
- Coolant

Attention:
When the coolant level is below the center of the sight-window the printer software will display a warning and shut down any print jobs. Make sure that you keep the coolant level near the top at all times to avoid stopping in the middle of a print job.

Illustration



[182] Fill the Coolant Reservoir

Fill the Coolant Reservoir

1. Remove the cap from the coolant reservoir located next to the green beacon light on top of the carriage.
2. Open the container of coolant fluid.
3. Insert the syringe into the fluid and draw back the plunger until the syringe is almost full.
4. Insert the hose into the coolant reservoir.

5. Press on the syringe plunger to inject the fluid. Inject the entire contents of the syringe. Repeat, if necessary, until the coolant level shows full on the sight-window.

Note:
Do not overfill the coolant as this can cause temperature variations.

6. Remove and store the syringe and the coolant fluid container until it is needed again.
7. Replace the cap on the coolant reservoir.

Replace the Spit Catcher Foam Pad

Introduction

The Spit Catcher consists of a slotted cover for the Maintenance Station drawer and a foam pad that is held in place under the drawer. The Spit Catcher is necessary for IJC2555 white ink and also for all five of the newer Océ IJC256 inks. These inks require a small jetting actions ("spitting") between printing times to keep the printheads in a ready-to-print state. This spitting action uses very little ink but does require that the operator clean the maintenance tray cover more frequently.

Purpose

Over time and with use, the inks can develops particles that can interfere with the internal jetting action of the nozzles in the printheads. If the flow of ink is restricted, print quality can be reduced. Therefore, for the inks that require it, spitting happens on a regular basis. A foam pad located on the underside of the maintenance drawer absorbs this small amount of ink.

Note:
Although the carriage is oriented so that the nozzles spit into the slots in the spit catcher, some ink will find it way onto the flat surface of the maintenance station drawer. Check the surface of the maintenance station when you perform the daily printhead maintenance. If you see any ink wipe it up with a clean cloth or paper towel.

When to do

Spitting only jets a small amount of ink, but eventually it will accumulate in the foam pad to a point of saturation. This is a consumable item so see your local sales representative to order it.

Note:
Be sure to keep the maintenance drawer closed (except when you do the printhead maintenance) so that exposure to light does not cure any accumulated ink.

How to Replace the Spit Catcher Foam Pad

1. Slide the maintenance door out from under the carriage.

2. Reach under the end of the door and pull on the spring-loaded knob while you hold the spit catcher metal base in place.

[183] Open Spit Catcher

3. Swing the metal base on its bracket part way down to reveal the pad.
4. Remove the spit catcher foam pad and replace it with a new one.

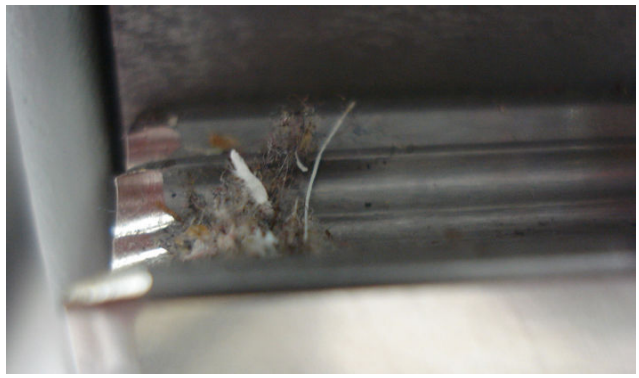
[184] Change Spit Catcher Pad

Clean Gantry Rails

Introduction

Dust and debris can accumulate on the gantry rails, which run along the length of the table. The bearings that run on the rails are equipped with shields that are designed to keep debris from entering the bearing housing. After a period of time and use, debris can accumulate on the outside of the bearing shields as the gantry travels along the table.

[185] Dust on the runner bearing block shields



[186] Dust on the gantry rail

When to do

If you notice any dirt or ink on the gantry rails, or an accumulation of debris on the grey rail bearing shields, clean them immediately with a Poly-Wipe lint-free cloth.

Note:
Gently wipe dirt or debris from the gantry rails or bearing shields to avoid removing the lubricating grease.

Attention:
In the event of an ink spill on the rail, it should be cleaned immediately, before the bearings have a chance to run over the spill. After the area has been cleaned, wipe the spill area again thoroughly with a water-moistened lint-free cloth to remove any chemical residue before running the gantry over the area again. Slight ink stains that remain on the rail after cleaning are not a major problem.

How to Clean the Rails and Bearing Block

1. Open the Maintenance Station cover to ensure that there is no possible gantry or carriage movement.
2. Use a dry lint-free cloth to remove any visible debris that has accumulated next to the runner bearing shields. It is only necessary to clean the outside bearing shields. When removing debris always wipe away from the shields so you don't push dust into the bearing block.
3. Wipe any debris from the gantry rails. Do this gently so that you do not remove the grease that lubricates the bearings as they move along the rails.
4. Close the Maintenance Station cover.

How to Change Ink Filters

Introduction

Each ink color has a filter that removes any particulate matter from the ink as it is pumped from the ink bag toward the printheads. The ink filters are located to the right of the AC power switch at the electronics end of the printer around the corner from the ink bags.

When to do

The ink filter for each color of ink must be replaced at least every 12 months or after 11 bags (22 liters) of ink have been consumed. If an ink filter becomes clogged, it will trap color pigment and affect the color balance of printed images. It can also cause damage to the ink system. It is important to change the filter before this occurs.
If the Nozzle Check print shows one color weaker than normal, this is an indication that the ink filter for the affected color is clogged and the filter must be replaced. Also, If you notice that an ink reservoir takes a long time to fill, check your records for when the filter for that color of ink was last changed. Make sure that the ink tubing from that filter is not kinked.

Note:
New ink filters will contain air that must be released. Air in the ink filter can affect the vacuum and result in dripping ink and deteriorated image quality as a result of nozzle dropout. Bleeding the ink filters is a strategy to avoid persistent nozzle dropout. You must bleed any trapped air out of the ink filters to prevent an overflow of ink into the 0.2 micron ink purge filters associated with the purge valves located on the top of the carriage. If any of the 0.2-micron purge filters shows signs of ink contamination you will need to place a service call to have them replaced. However, the preferred preventative maintenance method is to bleed the ink filters on a regular basis, especially when you install a new ink bag.

Before you begin

IMPORTANT! Open the sliding maintenance station door to disable the ink pumps. Close all of the purge valves on the top of the carriage.

Required tool

- Philips screwdriver (only if enclosure thumb-screws are too tight)
- Lint-free cloth

Attention:
A clogged ink filter can result in damage to your printer's ink system. Particulate matter buildup in the ink can cause problems that will require a service call. Be sure to change all ink filters every 12 months to avoid such problems.

How to Change an Ink Filter

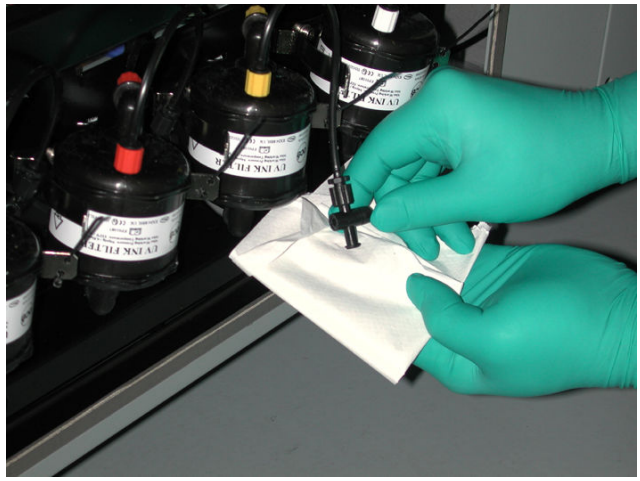
1. Open the sliding maintenance station door to disable the ink pumps.
2. Close all of the ink purge valves (they are located on the top of the carriage).
3. Disengage the ink bag for the color of filter you will replace. To do this press the release tab on the left side of the quick-release ink bag coupler and then pull it out to disconnect the ink bag.

[187] Remove Ink bag coupler

4. Remove the two screws that hold the ink filter enclosure cover in place (thumbscrews can be loosened by hand or use a Philips screwdriver if they are too tight).

[188] Remove Ink Filter Enclosure Cover

5. Locate the bleed tube valve on the top of the ink filter you are going to change (the cap that holds it in place indicates the color of the ink line into that filter).
6. Wrap a lint-free cloth around the end of the bleed tube of the ink filter to catch any ink that may spray out when you release the pressure in the next step.



[189] Ink bleed tube valve

7. Turn the bleed tube valve shutoff lever so that it is parallel to the bleed tube to open the valve and release any pressure, then flip the shutoff lever back to the perpendicular closed position after about 30 seconds.

Note:
The ink system is under pressure and so it is possible that some ink may spray out at first. Keep the cloth wrapped around the end of the bleed tube so that any ink spay is contained.

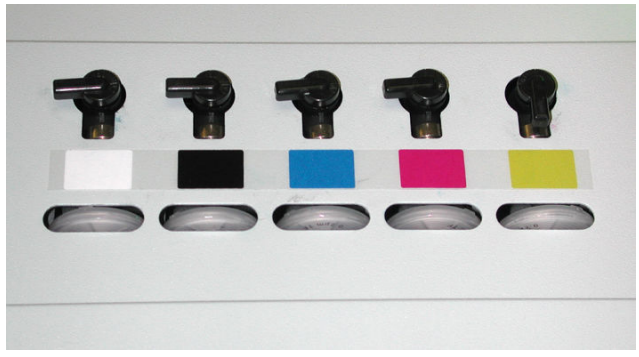
8. Pull the target ink filter out of its metal retainer clip.
9. Unscrew the bleed tube cap from the old filter and thread it into the top connector of the new filter.
10. Unscrew the blue cap and ink tube at the top connection to the old filter and screw it into the top connection of the new filter. Place the cap that came with the new filter on the old filter to prevent ink from leaking out of the old filter.
11. Repeat the previous step for the bottom connection.

Note:
Wipe off any spilled ink, especially on the tubing as ink can damage the outside layer of the tubing.

12. Insert the new filter into the empty retainer clip and make sure the flow arrow on the filter points downward. Be careful not to pinch the ink lines.
13. Proceed to How to Bleed an Ink Filter.

How to Bleed an Ink Filter

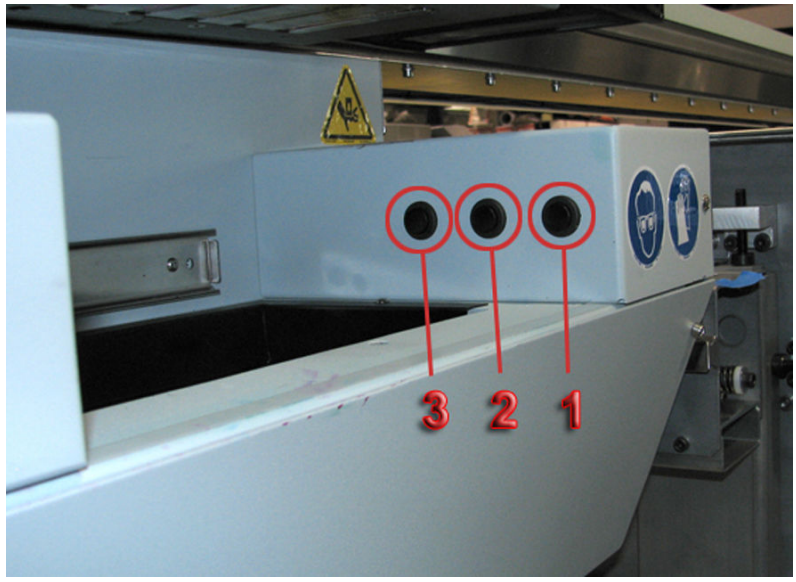
1. Open the ink purge valve of the target color to bleed and make sure the valves of the three (or four) other colors are closed.



[190] Yellow Purge Valve Open

2. Click on the ink status icon located in the top right corner of the Print Job Control screen of the printer software to monitor the ink status.

3. Press the Purge button (switch 1 on the right) to initiate an ink purge. Repeat this step until the ink status window shows an Ink Low condition for the target color.



[191] Maintenance Station Buttons

4. Press the Raise Carriage button (switch 2, middle) and then use the maintenance suction nozzle to remove any excess ink from the printhead that you purged.
5. Close the maintenance station door.
6. In the ink bay reconnect the ink bag coupler of the target ink bag to re-initiate ink fill.
7. Place a lint-free cloth below the bleed tube of the target ink filter to catch any ink.
8. Turn the valve shutoff lever so that it is parallel to the bleed tube to open the valve.
9. Keep the cloth close as you watch the open bleed tube. As soon as you see ink appear in the open end of the bleed tube, flip the shutoff lever back to the perpendicular closed position (this may take a few minutes, depending on the amount of air in the filter since the ink pump is only active for a brief period every 10 seconds).

Final Steps

1. Check the new filter to make sure there are no ink leaks.
2. Open any purge valves on the carriage that are still closed.
3. Use a felt pen or create a label to record the install date.
4. Replace the ink filter enclosure cover.
5. Perform routine printhead maintenance before printing.
6. Replace the ink filters every 12 months or after consumption of 11 bags (22 liters) of ink.

How to Change a UV Lamp Bulb

Introduction

Your Océ Arizona printer uses two UV lamps, one on each side of the carriage, to cure the UV ink during printing. The bulbs in these UV lamps have a limited lifetime and must be replaced by the operator if they fail or when they can no longer cure the ink at maximum available power.

When to do

Although the functional life of the UV lamps can be as high as 500 hours, there are factors that can reduce the expected lifetime. Operational practices, such as turning the lamps off and on frequently, using them at high intensity all of the time, or touching the bulbs with your fingers, can shorten their life. Océ recommends that both UV Lamp bulbs be replaced at the same time to ensure that the curing effect is balanced when printing in both directions. In the case of a premature failure or accidental breakage of one lamp, the operator can decide to replace only one lamp but should confirm image consistency after the replacement. Uneven curing can cause gloss banding in the printed image. We also recommend that you change the lamp filters when the bulb is changed.

Note:
The Flatbed Settings icon on the printer interface allows the operator to control the power output of each UV lamp independently. To extend lamp life, use the lowest setting that provides adequate curing for a particular media. However, avoid handling media with insufficient curing as partially cured UV ink on your skin can cause irritation and sensitization.

Before you begin

1. Turn off the ink temperature.
2. Turn off UV lamps.
3. When the ink temperature is below 40°C (104°F) and the UV Lamps are cool, click on the Shutdown button in the Tools and Utilities module.
4. Turn off the printer power (see How to Power the Printer On and Off for proper procedure).
5. Apply a lockout to the AC power switch.

Caution:
The UV lamps and the carriage guard may be hot if the printer has been active. Avoid touching the guard and the lamp assembly until it is cool.

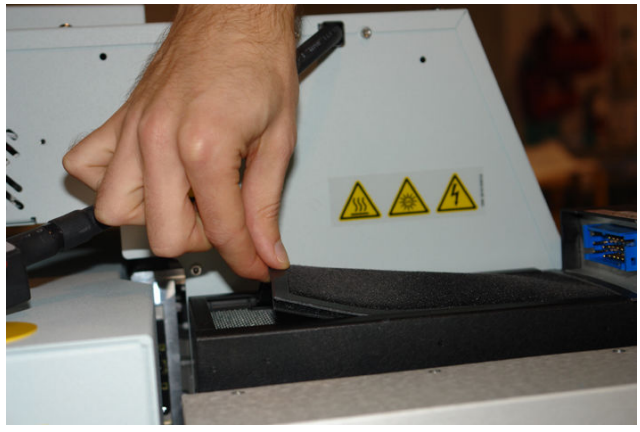
Caution:
These UV lamp bulbs contain mercury, and if they are broken the vapor is toxic if inhaled. The lamp bulbs must be disposed of according to local environmental regulations.

How to Remove the Lamp Housing

1. Remove the safety fence by lifting it straight up and then away from the carriage.
2. Disconnect the UV lamp housing power cable connector by pressing in the two blue tabs on either side and pull it out.

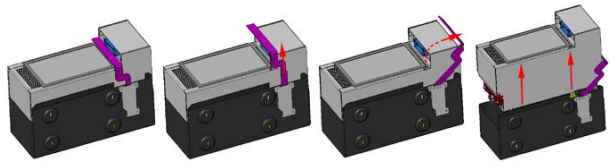
[192] Disconnect power cable

3. Remove the foam filter from the top of the housing by lifting the exposed edge as shown below. It is flexible and will bend as you remove it.



[193] Remove Lamp Filter

4. Swing the UV lamp housing interlock safety arm out of the way:



[194] Interlock Safety Arm

- first lift it straight up to the height of the blue connector;
- then angle it away from the connector as you raise it higher; and
- finally swing the arm back over the connector and past the raised part of the lamp housing.

Note:
The UV lamp housing cannot be removed from the carriage until the bracket is swung out of the way.

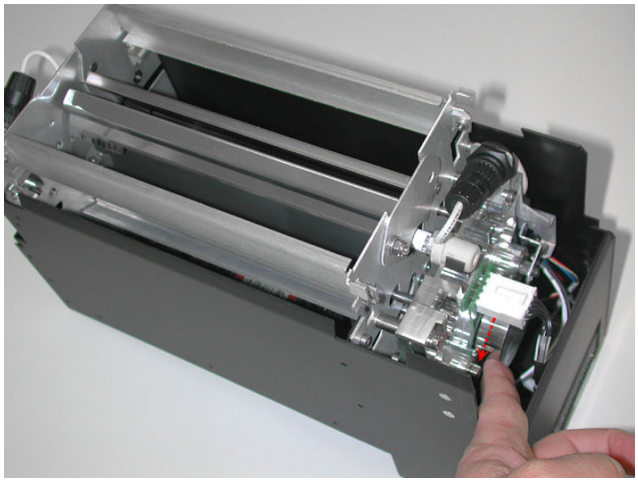
5. Lift the UV lamp housing straight up and out of its carriage bucket.

How to Replace the UV Lamp Bulb

Attention:
Use cotton gloves when handling the UV lamp and Shutter assemblies; oil from fingers can harm these components and shorten lamp life.

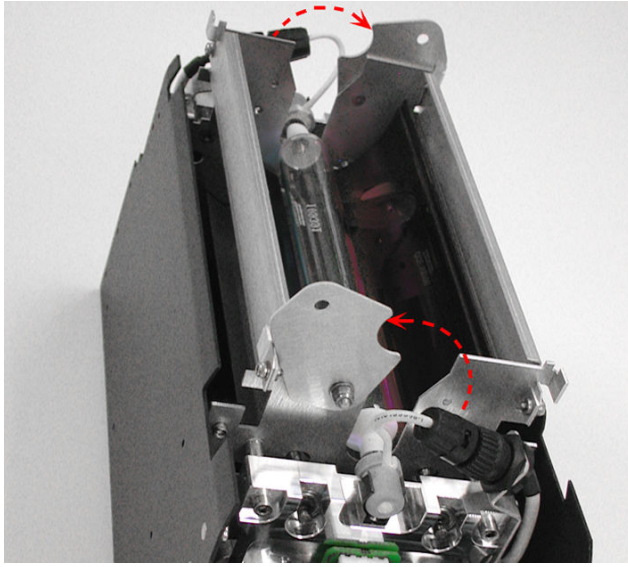
1. Put on protective eye wear and cotton gloves.
2. Turn the housing upside down on a clean work space away from the printer.

3. Rotate the shutter motor dampener until the UV shutters are open.



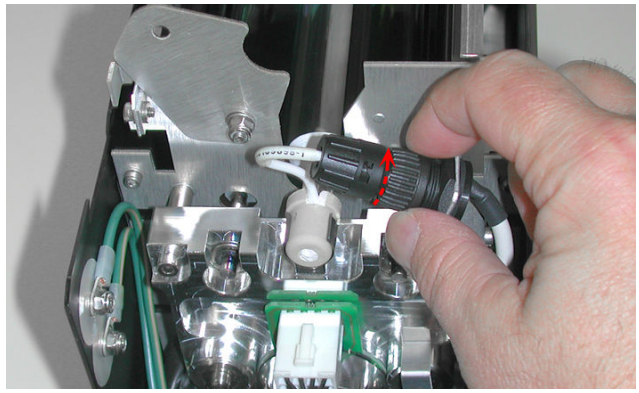
[195] Rotate shutter motor dampener

4. Open the two UV light shields located at both ends of the UV lamp by rotating them fully in the counter-clockwise direction.



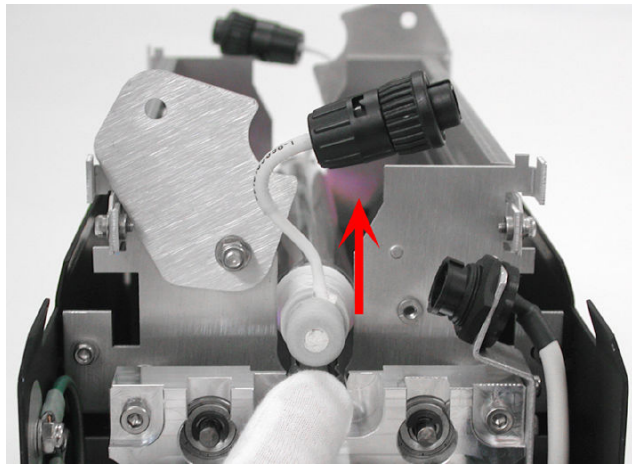
[196] Rotate light shields

5. Disconnect both UV lamp cables by first loosening the screw lock and then pulling the lock away from the connectors.



[197] Remove connectors

6. Ease the bulb out of the retainer clips, one end at a time and then remove it from the housing.



[198] Remove UV lamp bulb

7. Place the used bulb in a container for recycling.
8. Wipe the new bulb with the supplied alcohol wipe.
9. Ensure that the UV shutters are still open (rotate the motor dampener if they are not).
10. Pick up the new bulb by its ceramic ends.
11. Insert the bulb into the retainer clips one at a time, ensuring that the bulb is centered and seated firmly into the clips at both ends.
12. Reconnect the bulb connectors and tighten the screw locks.
13. Rotate the two UV light shields clockwise back to the closed position so that they are parallel to the end plate.

How to Replace the Lamp Housing

1. Wipe both sides of the quartz window in the bottom of the UV lamp housing bucket with an alcohol wipe.
2. Place the housing back into the carriage bucket.
3. Replace the old filter that was removed from the top of the housing with a new one.
4. Rotate the interlock safety bracket back into position to lock the lamp housing in place.
5. Reconnect the UV power cable connector to the top of the UV lamp housing.
6. Repeat the above two sets of procedures to change the bulb in the other lamp housing.

Note:
We recommend that both UV Lamp bulbs be replaced at the same time to ensure that the curing effect is balanced when printing in both directions.

7. Replace the safety fence onto the carriage base.
8. Unlock the AC power switch and power on the printer.
9. Dispose of the old UV lamp bulbs according to local environmental regulations.

How to Maintain White Ink

Introduction

Printers with the White Ink Option require care and maintenance to ensure that the white printheads function properly. White ink is re-circulated in the system to limit any settling of the ink. For this to take place, **the printer must be left powered On at all times**. If the printer is powered down for maintenance or service, once it is powered on again and the ink reservoirs are full, agitate the white ink bag and perform several purges. A new white ink bag must be gently agitated before it is connected and then at least once a week thereafter. Daily maintenance is essential with the white ink option as it will purge out a small amount of white ink in order to keep the printheads clear and operating reliably.
Printers with the white ink option will spit into the "spit catcher" (located over the maintenance tray) every few minutes in order to keep the white nozzles clear.

When to do

Daily

- Perform printhead maintenance every day for all colors, including white.

Weekly

- Agitate the white ink bag as described on the ink bag label (even when white is not actively used)
- Swab all printheads

As Needed

- Purge the white printheads as required (i.e., if there are too many nozzle dropouts). This may be necessary multiple times per day.

Before you begin

Make sure you wear eye protection and nitrile gloves when handling or cleaning ink. Also, when working around the maintenance station take measure to protect your clothing and any exposed areas of skin.

Attention:
Failure to properly maintain the white ink as described here can result in damage to the printheads.

How to Agitate the White Ink Bag

If you do not agitate the white ink bag at least once a month, you will see a message on the printer display that reminds you to agitate it. You will not be able to use the printer until this is done. This ensures that the white ink pigment does not settle in the bottom of the bag and thus reduces the chance of sludge being released into the ink reservoir.

1. Open the clear plastic door of the Ink Bay.
2. Press the quick-release coupler button at the bottom corner of the white ink bag to release it.
3. Unhook the bag from the top of the ink station.
4. Agitate the white ink bag according to the illustration on the bag.

Note:
You must agitate the white ink bag for at least 5 seconds or the message will remain on the screen.

5. Replace the bag in the Ink Bay.

Roll Media Option Maintenance

RMO Maintenance Guidelines

Introduction

The Océ Arizona 550 GT operator is responsible for the regular maintenance of the printer and, if it is installed, the roll media option. When the RMO unit is kept clean and free of blemishes and defects, you will be ensured of accurate media transport and optimal print quality. This section provides information about what is required for proper RMO maintenance and cleaning.

Note:
Any time there is any foreign matter or debris on the platen or the capstan it must be removed immediately. Any spilled UV ink must be removed immediately, before it can cure from exposure to light.

RMO Maintenance

The following table provides our recommended maintenance activities. This is a minimum requirement and frequency will depend on environmental conditions and operator work habits. How to clean the capstan is explained in detail in the next section.

Maintenance Action	Contaminant
Clean the platen	Ink
	Glue (release liner)
	Silicon (release liner)
Clean the capstan	Paper dust
	Coffee, tea, lemonade, milk, etc.
	Ink (cured, uncured)
	Glue (release liner)
	Silicon (release liner - e.g. Avery control tag 180)
Clean the media loading bay	Dust
	Ink

How to Clean the Rubber Capstan

Introduction

The capstan is a rubber-coated roller that helps to track and guide the media position. It has an encoder at one end and a brake at the other. The capstan must be kept clean and its rubber surface free of blemishes or defects to ensure accurate media transport and optimal print quality.

When to do

Any time there is any foreign matter or debris on the capstan it must be removed immediately.

Required tool

- Swiffer Brush (or equivalent dust remover)
- Lint-free absorbent clothes
- Rubber gloves
- Mild detergent
- Lint-free cloth
- Isopropyl alcohol (95% pure)

Note:
Always wear safety glasses with side shields and nitrile gloves when working with ink or liquid solvents. If a significant amount of ink has spilled, consider donning an apron or smock.

Attention:
The only way to remove cured ink is if the area can be scraped without causing damage (therefore do not allow ink to dry on the platen or the capstan! Partly cured ink can be removed with alcohol. Make sure that any spilled ink is removed immediately before it has a chance to cure due to exposure to light. The longer it is left exposed, the more difficult (or impossible) it will be to remove the ink.

Removing Solid Debris

1. Dust the surface of the capstan using a Swiffer or other lint-free brush or cloth. Surface may be brushed in any direction.

[199] Remove lint, dust, paper particles and debris

Removing Stains (coffee, tea, soda pop, etc.)

Supplies Needed: Rubber gloves, soap, hot water, and lint-free cloth.

1. Put on nitrile gloves
2. Mix a cleaning solution that is 50:1 hot water to soap.

Note:
Use a mild detergent such as Ivory - avoid soaps that have dies, moisturizing oils, or perfumes as they may damage the capstan. Read the label! Our R&D Lab has tested only Ivory Detergent. If you are uncertain about a detergent try it out in a 50:1 solution on a small area at the end of the capstan.

3. Wet the cloth in the cleaning solution and wring out excess liquid. Scrub the surface of the capstan using the cleaning cloth.
4. Allow adequate time for the capstan to dry.

Note:
If scrubbing action leaves debris on the surface, wait for the surface to dry completely, then follow the procedure listed above for “Removing Solid Debris”.

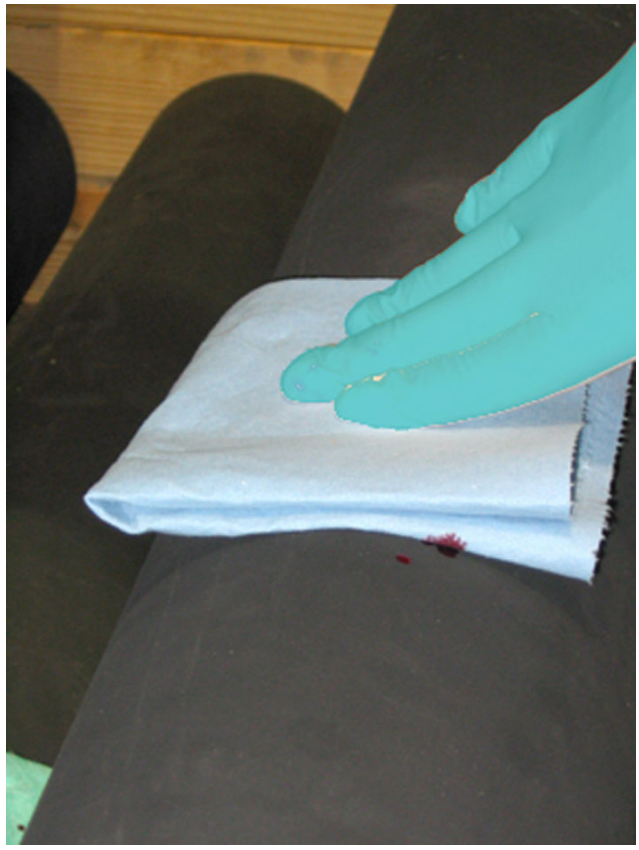
Removing Uncured Ink

Supplies needed: Nitrile gloves, safety goggles with side shields, several absorbent clothes, and Isopropyl Alcohol (95% pure).

1. Put on gloves and goggles.

[200] Ink Spill on Capstan

2. Wipe up the majority of the ink by blotting with the absorbent cloth.

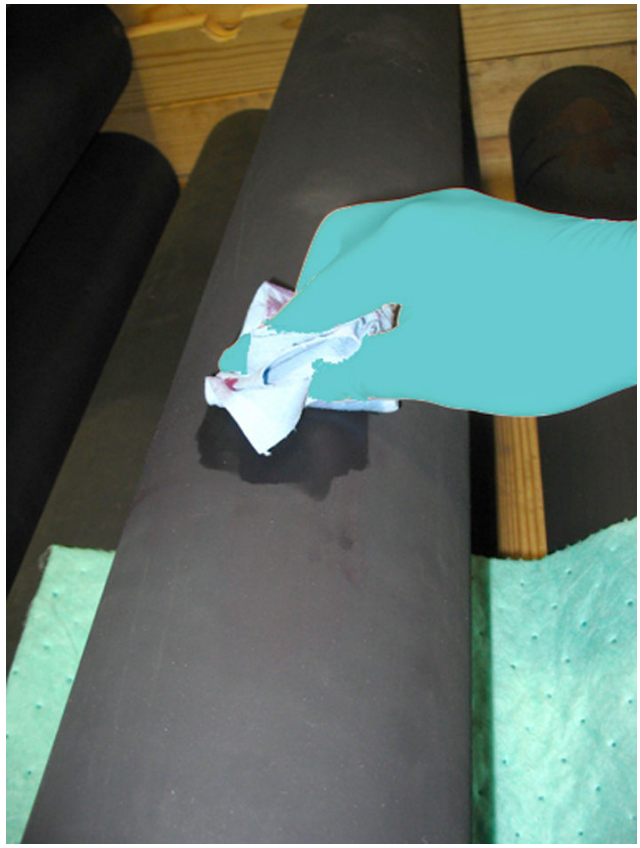


[201] Wipe up ink with cloth

3. Wet a new absorbent cloth with alcohol and wipe up the remaining ink.

[202] Wet fresh cloth with alcohol

Note:
It may be difficult to tell whether or not all the ink has left the surface. Continue to wet and wipe the capstan surface until the cloth does not show any sign of ink color.



[203] Wipe up remainder of ink

4. Allow adequate time for capstan to dry.

Note:
If the scrubbing action leaves fibers from the cloth on the surface, wait for the surface to dry completely, then follow the procedure listed above for Removing Solid Debris.

Result

When the capstan is kept clean and its rubber surface free of blemishes or defects you will be ensured of accurate media transport and optimal print quality. If its surface is badly damaged the capstan will need to be replaced.

Appendix A
Application Information

Application Resources on the Web Site

Introduction

There are many resources available on the Océ Arizona Customer Support web site: Application Hints and Tips, Media Recommendations, Media Models, MSDS information, Customer Application Bulletins, and more. To access this information, navigate to: www.dgs.oce.com/ then select Printer Support - Customer Access.

There is a Media Notes document that contains useful information about printing on the following media:

- Card Stock
- Clear Acrylic or Polycarbonate
- Plastic Coated Aluminum Sheet such as DiBond®
- Fluted Polypropylene
- Foam Cored Clay Coated Paper Capped Board
- Foamed PVC such as Forex® or Sintra®
- Glass
- Heavyweight Outdoor Poster Paper such as IJM 601 or HPSTERSOL
- Irregularly Shaped Materials
- Opal/White Acrylic or Polycarbonate such as Lexan®
- Polystyrene
- Pre-Stretched Canvas
- Textiles
- Un-Documented Materials
- Variable Height Materials

There is also a link to the Océ Media Guide web site that contains useful information about all Océ-recommended media and consumables.

The Customer Application Bulletins posted on the web site deal with many aspects of handling and managing media and printing with your Arizona printer. At the time of this publication, the following bulletins were available to view or download:
Application Bulletin 1 - New Media Profiles Available
Application Bulletin 2 - How to Select A Media Model and ICC Profile
Application Bulletin 3 - How to Achieve Optimal UV Lamp Power
Application Bulletin 4 - ONYX ProductionHouse Anti-Virus Software Issues
Application Bulletin 5 - How to Handle and Prepare Media for Printing
Application Bulletin 6 - How to Improve UV Ink Adhesion
Application Bulletin 7 - About Media Models and Application Notes
Application Bulletin 8 - How to Hold Media Flat on the Printer Table
Application Bulletin 9 - How to Handle Media after Printing
Application Bulletin 10 - How to Deal with Static
Application Bulletin 11 - Printing Backlit Materials
Application Bulletin 12 - Printing Multiple Pieces of Media Simultaneously
Application Bulletin 13 - Printhead Maintenance - Revised Version
Application Bulletin 14 - New Ruler Guides Available in Special Prints
Application Bulletin 15 - How to Print Lenticular Images
Application Bulletin 16 - Media Model and ICC Profile Creation Guidelines
Application Bulletin 17 - Managing Arizona 250GT Ink Inventory
Application Bulletin 18 - How to Bleed Trapped Air from an Ink Filter
Application Bulletin 19 - Reduce Static with an Océ Static Suppression Kit
Application Bulletin 20 - How to Print on Backlit Materials Using Quality-Density Mode
Application Bulletin 21 - More Media Models Added to Support Web Page
Application Bulletin 23 - Double-Sided Printing on the Océ Arizona Roll Media Option
Application Bulletin 24 - Printer Shutdown Procedures
Application Bulletin 25 - Use a White Ink Underlay to Improve Image Quality
Application Bulletin 26 - Variable Reduced Density in White Spot Data for Raster Images
Application Bulletin 27 - Ink Filters Must be Changed Every 12 Months
Application Bulletin 28 - Selecting Appropriate Océ Ink for Your Applications: Océ IJC255 or Océ IJC256
Application Bulletin 29 - Recommended Media for Use With the New Océ IJC256 Inks
Application Bulletin 30 - How to Create Reduced Density White Ink Output
Application Bulletin 31 - How to Print White Ink Gradients
Application Bulletin 32 - How to Work Safely in a UV Ink Environment
Application Bulletin 33 - Improve White Ink Reliability When Printing Small Amounts of White
Application Bulletin 34 - Océ Arizona 200/250/300/350 GT & 350 XT Software Revision Highlights
Application Bulletin 35 - Océ Arizona Printer Care and Use Poster

Customer Support

The information found on the Océ Customer support web site is based on our experience with the Océ Arizona printers. It is offers suggestions or solutions for dealing with various situations. Since this information is subject to change and more new material is added as it becomes available, please check the web site occasionally for the most current information.

Index

AC power
AC power 75
AC power plug
AC power plug 75
Alphanumeric input
Alphanumeric input 52

B

Banding
Banding 224
Beacon Light States
Beacon Light States 49
Beacon Light Status
Beacon Light Status 27

C

Carriage Collision
Carriage Collision 98
Carriage Guard
Carriage Guard 46
Carriage Interlock
Carriage Interlock 26
Change an Ink Bag
Change an Ink Bag 215
Clogged Nozzles
Clogged Nozzles 224
Coolant Reservoir
Coolant Reservoir 249
Custom Vacuum Zones
Custom Vacuum Zones 91

E

Emergency Stop buttons
Emergency Stop buttons 49
Emergency Stop Function
Emergency Stop Function 26
Emergency Stops
Emergency Stops 46
Emergency-Stop button
Emergency-Stop button 26
Extended Power Off
Extended Power Off 77

F

Flatbed button
Flatbed button 85
foot switch
foot switch 114

G

Gantry Rails
Gantry Rails 254
Graphical User Interface
Graphical User Interface 50

I

ICC profile
ICC profile 97
Ink Bag
Ink Bag 214
Ink Consumption
Ink Consumption 18
ink delivery
ink delivery 210
Ink Filters
Ink Filters 46, 213
ink safety
ink safety 210
Ionization
Ionization 148
Ionizer bar
Ionizer bar 148

L

Lock Out
Lock Out 78

M

Maintenance
Maintenance 226
Maintenance Schedule
Maintenance Schedule 226
Maintenance Station
Maintenance Station 46, 231
Measurement Units
Measurement Units 64
Media Adhesion

Media Adhesion 99
Media shaft
Media shaft 114
Media Storage
Media Storage 97
media thickness
media thickness 85
MSDS (Material Safety Data Sheets)
MSDS (Material Safety Data Sheets) 213
MSDS Ink Information
MSDS Ink Information 213

N

network connection
network connection 80
network connection settings
network connection settings 62
network name
network name 80
Nozzle Check
Nozzle Check 239
nozzle plate
nozzle plate 231

O

Onscreen Keyboard
Onscreen Keyboard 50
Onyx Printer Driver
Onyx Printer Driver 80
Operator Control Station
Operator Control Station 46
Operator Interface Module Tabs
Operator Interface Module Tabs 51

P

piezoelectric
piezoelectric 18
Print button
Print button 86
Print Job Control
Print Job Control 52
print quality
print quality 239
Printer Driver
Printer Driver 80
ProductionHouse
ProductionHouse 18

R

Reduce Artifacts
Reduce Artifacts 101
RMO hardware
RMO hardware 114
RMO print speeds
RMO print speeds 120
RMO specs
RMO specs 120

S

safety interlock system
safety interlock system 26
Safety Labels
Safety Labels 28
Safety Training
Safety Training 74
Special Prints
Special Prints 51
Specifications
Specifications 16
Static and Humidity
Static and Humidity 148
Static Suppression
Static Suppression 148
suction-head
suction-head 233

T

Thermal Expansion
Thermal Expansion 99
Training
Training 74

U

Underlay Board
Underlay Board 101
Upgrade
Upgrade 51
User Interface Settings
User Interface Settings 64
UV Flush
UV Flush 210

V

Vacuum Bleed Valve
Vacuum Bleed Valve 46, 89
Vacuum Overlay
Vacuum Overlay 88
Vacuum Pump Timeout
Vacuum Pump Timeout 88
Vacuum System
Vacuum System 88
Vacuum Zone Control
Vacuum Zone Control 46
Vacuum Zones
Vacuum Zones 85, 88
VariaDot
VariaDot 18
Ventilation
Ventilation 20, 210